DOCUMENT RESUME

ED 286 070 CE 048 414

AUTHOR	McNeil, John M.; Lamas, Enrique J.
TITLE	Male-Female Differences in Work Experience, Occupation, and Earnings: 1984. Data from the Survey of Income and Program Participation.
INSTITUTION	Bureau of the Census (DOC), Suitland, Md. Population Div.
PUB DATE	Aug 87
NOTE	49p.
AVAILABLE FROM	Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.
PUB TYPE	Statistical Data (110) -- Collected Works - Serials (022)
JOURNAL CIT	Current Population Reports; Series P-70 n10 Aug 1987
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Adults; Career Choice; Employed Women; *Employment Patterns; *Females; Income; *Males; *Salary Wage Differentials; *Work Experience

ABSTRACT

This report contains 23 tables reporting the differences between men and women in lifetime labor force attachment, occupation, and earnings. The information was collected from a sample of approximately 20,000 households in May, June, July, and August 1984, as part of the Survey of Income Program Participation. The first part of this report presents a description of the differences between male and female workers in the frequency of work interruptions, the duration of lifetime work experience, the amount of time spent on current jobs, and occupational patterns; the second part presents an earnings model that shows the relationship between variations in earnings and variations in a set of independent variables that are thought to be related to earnings. Some highlights of the findings are the following: (1) females were much more likely than males to have had periods of time during their adult life when they did not work at a job or business; (2) females tended to have less time on their current job than males; (3) the mean earnings-per-hour figure for male wage and salary workers was $10.53 and the figure for females was $7.13, a female-to-male earnings ratio of .68; (4) the female-to-male earnings ratio was not much higher for workers with no work interruptions than for all workers; (5) 57 percent of male college graduates had majored in law, medicine, dentistry, science, mathematics, business, economics, and engineering, whereas only 28 percent of females had majored in one of these fields; (6) males and females work in occupations that are to some degree segregated by sex; and (7) working in an occupation that has a high proportion of women has a negative effect on earnings. (KC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED286070

Current Population Reports

Household Economic Studies
Series P-70, No. 10

Male-Female Differences in Work Experience, Occupation, and Earnings: 1984

Data from the Survey of Income and Program Participation

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Issued August 1987

U.S. Department of Commerce
Clarence J. Brown, Acting Secretary
Robert Ortner, Under Secretary for Economic Affairs

BUREAU OF THE CENSUS
John G. Keane, Director

CE 049 414

BEST COPY AVAILABLE

Acknowledgments

This report was prepared by **John M. McNeil** (Chief) and **Enrique J. Lamas** of the Poverty and Wealth Statistics Branch, Population Division. **Cynthia J. Harpine** provided programming assistance. Statistical and clerical assistance were provided by **Anna H. Podany** and **Diana J. Lewis**. Data processing activities were directed and performed by **Donna Riccini**, Chief of the Income Surveys Programming Branch, Demographic Surveys Division, and her staff. Sampling review was conducted by **Thomas Moore** and **Andrea Meier** of the Survey of Income and Program Participation Branch, Statistical Methods Division, under the direction of **Rajendra Singh**, Chief. Overall direction was provided by **Gordon W. Green, Jr.**, Assistant Division Chief, Socioeconomic Statistics Programs, Population Division.

Data collection was conducted by Bureau of the Census interviewers under the overall direction of **Stanley D. Matchett**, Chief, Field Division. Publication planning, design, composition, editorial review, and printing planning and procurement were performed by the staff of Publications Services Division, **Walter C. Odom**, Chief.

BUREAU OF THE CENSUS
John G. Keane, Director
C.L. Kincannon, Deputy Director
William P. Butz, Associate Director for Demographic Fields
Roger A. Herriot, Senior Demographic and Housing Analyst

POPULATION DIVISION
Paula J. Schneider, Chief

SUGGESTED CITATION

U.S. Bureau of the Census, Current Population Reports, Series P-70, No. 10, *Male-Female Differences in Work Experience, Occupation, and Earnings: 1984*, U.S. Government Printing Office, Washington, D.C., 1987.

For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

Contents

	Page
Introduction	1
Highlights	1
Sex differences in work experience, occupation, and earnings	1
Work interruptions and lifetime work experience	1
Tenure on current job	3
Occupational characteristics	4
Persons with no earnings	5
Multivariate analysis of the earnings gap	6
An earnings model	6
Proportion of earnings gap accounted for by differences in characteristics	10
Selected references	11

TEXT TABLES

A. Percent of workers with one or more work interruptions, by years of school completed	2
B. Percent of workers with one or more work interruptions, by reason for interruption	2
C. Percent of potential work years spent away from work	2
D. Earnings per hour, by whether person had one or more work interruptions	3
E. Workers, by tenure on current job	3
F. Earnings per hour, by tenure on current job	4
G. Characteristics of selected occupations in 1979 and 1986: females as a percent of all workers and relative earnings of females	5
H. Percent of persons with no earnings	5
I. Coefficients of the earnings model	7
J. Mean values of independent variables of the earnings model	9
K. Proportion of male-female earnings differential accounted for by differences in the mean values of the independent variables	10

DETAILED TABLES

1. Workers with one or more work interruptions lasting six months or longer, by reason for interruption	13
2. Full-time workers with one or more work interruptions lasting six months or longer, by reason for interruption	14
3. Mean percent of potential work years spent away from work: all workers and full-time workers	15
4. Earnings per hour, by work interruption status: all workers	16
5. Earnings per hour, by work interruption status: full-time workers	17
6. Tenure on current job and years of work experience, by race and Hispanic origin	18
7. Percent distribution of workers, by tenure on current job, years of work experience, race and Hispanic origin	19
8. Tenure on current job and years of work experience, by years of school completed	20
9. Percent distribution of workers, by tenure on current job, years of work experience, and years of school completed	21
10. Earnings per hour, by tenure on current job, years of work experience, and years of school completed	22
11. Mean hourly earnings of female full-time workers and female-male earnings ratio in 1979 and 1986	23
12. Characteristics of persons with no earnings	27

APPENDIXES

	Page
A. Definitions and Explanations	29
B. Source and Reliability of Estimates	31
Source of data	31
Reliability of estimates	32
C. Facsimile of the 1984 SIPP Third Wave Questions	37

APPENDIX TABLES

B-1. Sample size by month and interview status	31
B-2. Standard errors of estimated numbers of persons	32
B-3. Standard errors of estimated percentages of persons	33
B-4. SIPP generalized variance parameters	34
B-5. CPS generalized variance parameters	34
B-6. Standard errors of estimates of 1986 hourly earnings of full-time workers: occupations with at least 75,000 full-time workers of each sex	35

SYMBOLS USED IN TABLES

– Represents zero.
X Not applicable.
NA Not available.
B Base is less than 75,000.

Male-Female Differences in Work Experience, Occupation, and Earnings: 1984

INTRODUCTION

This report presents data on differences between men and women in lifetime labor force attachment, occupation, and earnings. The information was collected from a sample of approximately 20,000 households in May, June, July, and August 1984 as part of the Survey of Income Program Participation (SIPP).

The questions about work experience were asked only of persons 21 to 64 years old. Respondents were asked to remember and report on certain labor force statuses for a period covering the person's adult work life (21 years of age and older). In some instances, information was obtained from a proxy respondent rather than the sample person. In order to reduce the effect of recall error, respondents were asked to identify only those changes in status that persisted for 6 months or longer. The questions on work experience and job tenure are reproduced in appendix C. The data on differences between the sexes in work experience and earnings are for persons with wage or salary income. Data are also provided, for comparison, on characteristics of persons with no earnings, that is, persons who were not in the labor force or who were unemployed during the month preceeding the interview month.

HIGHLIGHTS

(Note: The figures in parentheses show the 90-percent confidence interval for the estimate.)

- Females were much more likely than males to have had periods of time during their adult life when they did not work at a job or business. Among wage and salary workers 21 to 64 years of age, 47.0 percent of females (±0.6) and 13.2 percent of males (±1.0) had spent 6 months or longer without a job or business since their 21st birthday.

- Females tended to have less time on their current job than males. The proportion of females with 5 or more years on their current job was 45.3 percent (±1.0); the comparable figure for males was 55.2 percent (±0.9).

- The mean earnings-per-hour figure for male wage and salary workers was $10.53 (±0.21) and the figure for females was $7.13 (±0.16), resulting in a female-to-male earnings ratio of .68 (±0.02). The female-to-male earnings ratio among persons with no work interruptions was .69 (±0.02), not different than the ratio for all workers.

- There were major differences between male and female college graduates in their college field of study. Among males, 57 percent (±1.9) had majored in one of the following fields: law, medicine, dentistry, science, mathematics, business, economics, and engineering. Among females, 28 percent (±2.1) had majored in one of these fields.

- Males and females work in occupations that are, to some degree, segregated by sex. Among high school graduates, for example, males worked in occupations that were, on average, 21 percent (±1.0) female. Female high school graduates worked in occupations that were, on average, 68 percent (±1.2) female.

- Working in an occupation that has a high proportion of women has a negative effect on earnings. Among female college graduates, for example, a 1-percent increase in the proportion of females in their occupation reduces earnings by 0.42 percent (±0.09).

SEX DIFFERENCES IN WORK EXPERIENCE, OCCUPATION, AND EARNINGS

The first part of this report presents a description of the differences between male and female workers in the frequency of work interruptions, the duration of lifetime work experience, the amount of time spent on current jobs, and in occupational patterns. The first section also compares the characteristics of male nonearners with those of female nonearners. The second part presents an earnings model that shows the relationship between variations in earnings and variations in a set of independent variables that are thought to be related to earnings. Much of the research on sex differences in earnings is based on the human capital theory that argues that wages are primarily determined by productivity-related characteristics such as formal education and general and specific work experience. Researchers have noted that because women are much more likely than men to experience family-related work interruptions, women are likely to invest less in developing human capital. In addition, some researchers have found that time away from the labor force results in a depreciation of existing human capital. The second section presents the earnings model and shows the proportion of the earnings gap accounted for by male-female differences in human capital characteristics and in selected job and occupation characteristics.

Work Interruptions and Lifetime Work Experience

Females were much more likely than males to have spent 6 months or longer without a job or business since their 21st

birthday. (The data are for persons 21 to 64 years old.) The reasons reported for the work interruptions were an inability to find work, family reasons, illness or disability, or other reason. Time spent not working for the purpose of attending school, which is more likely to occur for younger persons, was excluded from these interruptions. Among workers (persons with wage or salary income in the last month of the reference period), 13 percent of males had spent one or more 6-month periods without a job or business, compared with 47 percent of females. (See table A.)

Table A. Percent of Workers with One or More Work Interruptions, by Years of School Completed

(Spent 6 months or longer without a job since age 21)

Age by years of school completed	All workers		Full-time workers	
	Male	Female	Male	Female
Workers 21 to 64 years old	13.2	47.0	12.1	42.0
21 to 29 years old	11.5	19.9	10.4	16.5
Less than 12 years	22.3	34.5	19.9	29.0
12 to 15 years	11.0	21.6	9.7	18.0
16 years and over	5.0	8.1	5.0	7.4
30 to 44 years old	14.1	53.1	13.0	46.5
Less than 12 years	20.8	65.2	18.1	58.5
12 to 15 years	14.8	57.0	13.7	51.0
16 years and over	9.7	36.7	9.4	30.3
45 to 64 years old	13.6	69.2	12.5	65.5
Less than 12 years	16.2	65.7	15.3	62.2
12 to 15 years	13.8	72.0	12.4	68.2
16 years and over	9.8	63.2	9.6	61.3

Workers under 30 years of age were less likely to have experienced a work interruption than workers above that age, but the effect of age was much smaller for males than for females. About 12 percent of males under 30 years had experienced an interruption, and the figure rose to only 14 percent for those in the 30-44 and 45-64 age groups. The percentage of females with an interruption was 20 percent for the youngest group, 53 percent for the 30-44 age group, and 69 percent for those 45 to 64 years of age.

Within the younger age groups, the likelihood of an interruption was inversely related to years of school completed. Among female workers under 30, for example, 35 percent of those who did not finish high school had experienced a work interruption as compared with 22 percent of those who had finished high school (but not college), and 8 percent of those who had finished college. Among female workers 45 to 64, however, the relationship between schooling and interruptions did not hold. The proportion of high school graduates in this age group who had experienced a work interruption was 72 percent, a figure higher than the rates of 66 percent for those who did not finish high school or 63 percent for those who finished college. (The latter rates were not statistically different.)

The reasons for the reported work interruptions are shown in table B. Among males, the most common reason for a work interruption was an inability to find work; approximately 8 percent had an interruption for this reason. Other reasons were illness or disability (2 percent) and family reasons (less than 1 percent). Family reasons were by far the most frequent reason given by women for work interruptions. About 41 percent had interrupted work for family reasons, 4 percent because of an inability to find work, and 2 percent because of illness or disability. Among females under 30 years of age, 14 percent had experienced a work interruption for family reasons. The figure was 46 percent for females 30 to 44, and 64 percent for females 45 to 64.

Table B. Percent of Workers with One or More Work Interruptions, by Reason for Interruption

(Universe is all workers)

Age	Inability to find work	Family reasons	Illness or disability	Other reason
Males, 21 to 64 years	7.9	0.3	2.2	3.4
21 to 29 years	8.6	0.1	1.1	2.0
30 to 44 years	8.5	0.4	2.2	3.6
45 to 64 years	6.4	0.2	3.2	4.5
Females, 21 to 64 years	4.2	40.7	2.3	3.5
21 to 29 years	4.4	13.5	0.6	2.3
30 to 44 years	4.7	46.0	2.7	3.7
45 to 64 years	3.2	64.2	3.6	4.6

Table C presents data on the duration of work interruptions in the form of the percent of potential work years spent away from work. Potential work years were defined as age minus years of schooling minus 6 years. The number of work years spent away from work was obtained by adding together the duration of all work interruptions.

Table C. Percent of Potential Work-Years Spent Away from Work

(Duration of all work interruptions as a percent of age minus years of schooling minus 6 years)

Age by years of school completed	All workers		Full-time workers	
	Male	Female	Male	Female
Workers 21 to 64 years	1.6	14.7	1.3	11.5
21 to 29 years old	2.3	5.3	1.8	3.7
Less than 12 years	3.3	8.8	2.2	6.5
12 to 15 years	2.2	5.7	1.8	3.8
16 years and over	2.0	2.6	1.6	2.3
30 to 44 years	1.6	16.6	1.2	12.3
Less than 12 years	2.6	20.2	1.8	16.3
12 to 15 years	1.5	17.6	1.3	12.8
16 years and over	1.2	12.1	1.0	9.5
45 to 64 years	0.9	22.7	0.7	19.5
Less than 12 years	1.0	19.2	0.7	16.9
12 to 15 years	0.8	24.1	0.6	20.3
16 years and over	0.9	23.0	0.9	20.4

Table D. Earnings Per Hour, by Whether Person Had One or More Work Interruptions

(Universe is all workers)

Age by years of school completed	No work interruptions			One or more work interruptions		
	Male	Female	Female to male ratio	Male	Female	Female to male ratio
Workers 21 to 64 years old	$10.76	$ 7.44	.69	$ 8.47	$ 6.71	.79
21 to 29 years old	7.98	6.64	.83	6.77	5.24	.77
Less than 12 years	6.59	5.30	.80	5.66	4.31	.76
12 to 15 years	7.70	6.15	.80	6.76	5.28	.78
16 years and over	9.91	8.54	.86	10.81	6.90	.64
30 to 44 years old	11.60	8.40	.72	8.93	6.85	.77
Less than 12 years	8.09	5.56	.69	7.13	5.26	.74
12 to 15 years	10.71	7.60	.71	8.65	6.61	.76
16 years and over	14.68	10.85	.74	11.44	9.29	.81
45 to 64 years old	12.60	7.57	.60	9.28	6.98	.75
Less than 12 years	9.01	5.54	.61	8.00	5.62	.70
12 to 15 years	12.07	7.62	.63	8.75	6.83	.78
16 years and over	18.03	11.10	.62	13.95	9.74	.70

Male workers had spent about 2 percent and female workers had spent about 15 percent of their potential work years away from work. Young female workers had spent a smaller proportion of time away from work than female workers in the 30-44 or 45-64 age groups (5, 17, and 23 percent, respectively).

Human capital theory suggests that, other things being equal, persons with more experience should have higher earnings than persons with less experience. Table D shows earnings per hour by whether the person had experienced a work interruption. For both males and females, workers with no interruptions had higher earnings than those with one or more interruptions. Males without an interruption had mean earnings per hour of $10.76 and those with an interruption had earnings per hour of $8.47. The comparable figures for females were $7.44 and $6.71, respectively.

Because females were more likely than males to have had a work interruption, it might be supposed that male-female wage comparisons that are based only on persons who have had no work interruptions might show relatively close levels of earnings. The data in table D show that large differences exist even within the group with no interruptions. The female-to-male ratio was .69 for all workers (21 to 64 years of age), .83 for workers 21 to 29, .72 for workers 30 to 44, and .60 for workers 45 to 64.

Tenure on Current Job

The number of years spent on a current job is an important variable in human capital theory. Productivity and earnings are expected to increase with specific experience and on-the-job training. Earlier tables showed data on lifetime work experience. Table E shows data on the number of years with the current employer (job tenure) by itself and classified by lifetime work experience.

A major job tenure difference between males and females is in the proportion of persons with 10 or more years on their current job; 36 percent of males had such tenure, compared with 23 percent of females. Approximately 40 percent of male workers had 20 years or more of work experience, and 26 percent had that amount of work experience plus 10 years or more

Table E. Workers, by Tenure on Current Job

(Numbers in thousands. Universe is all workers)

Characteristic	Male		Female	
	Number	Percent	Number	Percent
Workers 21 to 64 years	44,195	100.0	35,576	100.0
Tenure on Current Job				
Less than 2 years	9,722	22.0	9,117	25.6
2 to 4 years	10,046	22.7	10,363	29.1
5 to 9 years	8,596	19.4	7,992	22.5
10 years or more	15,831	35.8	8,104	22.8
Years of Work Experience by Tenure on Current Job				
Experience less than 5 years	3,868	8.8	5,071	14.3
On job less than 2 years	2,174	4.9	2,980	8.4
On job 2 years or more	1,693	3.8	2,090	5.9
Experience 5 to 9 years	8,167	18.5	9,912	27.9
On job less than 2 years	2,835	6.4	2,947	8.3
On job 2 to 4 years	2,913	6.6	3,845	10.8
On job 5 years or more	2,419	5.5	3,120	8.8
Experience 10 to 19 years	14,286	32.3	12,479	35.1
On job less than 2 years	2,889	6.5	2,169	6.1
On job 2 to 4 years	3,189	7.2	3,219	9.0
On job 5 to 9 years	3,630	8.2	3,324	9.3
On job 10 years or more	4,577	10.4	3,767	10.6
Experience 20 years or more	17,875	40.4	8,114	22.8
On job less than 2 years	1,825	4.1	1,020	2.9
On job 2 to 4 years	2,250	5.1	1,209	3.4
On job 5 to 9 years	2,546	5.8	1,548	4.4
On job 10 years or more	11,254	25.5	4,337	12.2

of job tenure. The comparable figures for female workers were 23 percent and 12 percent, respectively. Table D provides earnings data for persons by work interruption history; table F provides earnings data by years of (lifetime) work experience by tenure on current job.

The data show that males earn more than females within each of the experience-tenure categories. Among persons with 20 years or more of experience and 10 years or more of job tenure, the earnings ratio was .68 ($8.81/$12.95).

Occupational Characteristics

Earnings vary by occupation, and male-female earnings differentials are influenced by differences in occupational patterns. Because there are 503 different occupations in the detailed classification system, it is necessary to conduct large scale surveys to measure the proportion of females in given occupations and the earnings levels of males and females in given occupations. The sample size of the SIPP is not large enough to provide data for most detailed occupation categories, and even the sample size of the Current Population Survey (approximately 60,000 households) is adequate only for those occupations with relatively large numbers of workers. Table 11 provides data from the 1980 census and the March 1987 Current Population Survey on the proportion of females and their relative earnings in each occupation that had at least 100,000 full-time workers in 1979. Data for a selected set of occupations are presented in table G.

The data in table G illustrate the difference in the occupational distributions for males and females, and show that the male-female earnings differential is present within occupational categories. The table also shows some of the changes that occurred between 1979 and 1986. The number of females as a percent of full-time workers rose in a number of professional, managerial, and technical occupations (e.g. accountants and auditors, computer programmers, managers and administrators, computer systems analysts, and lawyers) and the female-to-male earnings ratio also increased in a number of the occupations shown in table G. Changes in occupational composition are likely to be more pronounced for younger workers, but because of the limited sample size of the survey, detailed occupation data by age are not available. Data from the next decennial census could be used to examine this issue.

In spite of some recent progress, there is ample evidence that females are more likely to be in occupations that pay relatively low wages. In the earnings model that will be introduced later, the effect of differing occupational patterns will be tested by a variable that measures the percentage of persons in each occupation who are female. It is hypothesized that the earnings of a person, regardless of sex, will be lower the higher the proportion of females in his or her occupation.

Table F. Earnings Per Hour, by Tenure on Current Job

(Universe is all workers)

Characteristic	All workers			Full-time workers		
	Male	Female	Female to male ratio	Male	Female	Female to male ratio
Workers 21 to 64 years	$10.53	$7.13	.68	$10.82	$7.52	.70
Tenure on Current Job						
Less than 2 years	8.22	5.73	.70	8.46	6.03	.71
2 to 4 years	9.32	6.73	.72	9.38	6.78	.72
5 to 9 years	10.62	7.70	.73	10.42	7.56	.73
10 years or more	12.66	8.66	.68	12.38	7.91	.64
Years of Work Experience by Tenure on Current Job						
Experience less than 5 years	6.83	5.48	.80	7.19	5.88	.82
On job less than 2 years	6.64	5.23	.79	7.07	5.72	.81
On job 2 years or more	7.07	5.85	.83	7.33	6.07	.83
Experience 5 to 9 years	8.15	6.62	.81	8.35	6.95	.83
On job less than 2 years	7.49	5.95	.79	7.74	6.36	.82
On job 2 to 4 years	8.33	6.67	.80	8.45	6.91	.82
On job 5 years or more	8.70	7.20	.83	8.89	7.45	.84
Experience 10 to 19 years	10.77	7.78	.72	10.95	8.07	.74
On job less than 2 years	9.17	6.17	.67	9.50	6.56	.69
On job 2 to 4 years	10.22	7.36	.72	10.39	7.69	.74
On job 5 to 9 years	11.07	8.43	.76	11.15	8.71	.78
On job 10 years or more	11.94	8.49	.71	12.01	8.53	.71
Experience 20 years or more	12.22	7.80	.64	12.41	8.15	.66
On job less than 2 years	9.73	5.65	.58	10.20	6.12	.60
On job 2 to 4 years	11.02	6.79	.62	11.27	6.92	.61
On job 5 to 9 years	11.82	7.16	.61	11.96	7.42	.62
On job 10 years or more	12.95	8.81	.68	13.02	9.10	.70

Table G. Characteristics of Selected Occupations in 1979 and 1986: Females As a Percent of All Full-Time Workers and Relative Earnings of Females

Occupation	Females as a percent of all full-time workers		Ratio of female to male earnings (full-time workers)	
	1979	1986	1979	1986
Secretaries	98.8	99.2	.58	(B)
Registered nurses	94.6	92.7	.82	(B)
Bookkeepers, accounting and auditing clerks	88.1	93.0	.66	.74
Nursing aides, orderlies, and attendants	85.1	88.3	.72	.81
Cashiers	77.7	79.8	.71	.75
Computer operators	56.6	63.8	.69	.73
Assemblers	47.2	42.1	.71	.75
Accountants and auditors	34.0	44.7	.60	.72
Computer programmers	28.0	39.7	.80	.81
Supervisors and proprietors, sales occupations	22.4	26.6	.57	.55
Managers and administrators, n.e.c.[1]	22.1	28.9	.51	.61
Computer systems analysts	20.4	29.7	.79	.83
Janitors and cleaners	15.3	21.0	.74	.69
Lawyers	10.4	15.2	.55	.63
Sales representatives, mining, manufacturing and wholesale	10.1	13.4	.62	.72
Electrical and electronic engineers	4.4	9.4	.75	(B)
Truck drivers, heavy	1.5	1.5	.71	(B)
Carpenters, except apprentices	1.1	0.5	.71	(B)
Automotive mechanics, except apprentices	0.9	0.6	.86	(B)

[1]Not elsewhere classified.
Note: Data for 1979 are from the 1980 census of population. Data for 1986 are from the March 1987 Current Population Survey.

Persons With No Earnings

Approximately 20 percent of the males and 43 percent of the females 21 to 64 years of age had no earnings in the last month of the reference period (the month prior to the interview). The proportion of persons with no earnings varied by age, marital status, and other characteristics. (See table H.) Persons in the 55-64 age group were less likely than younger persons to have earnings. About 38 percent of males and 62 percent of females in this age group were nonearners. Among those who were married with spouse present, 16 percent of males and 48 percent of females had no earnings. Among the never married, the proportion with no earnings was approximately 27 percent for males and 30 percent for females. Women with young children were less likely than other women to have earnings: 57 percent of those with a child under 3 years and 50 percent of those whose youngest child was between 3 and 5 years were nonearners.

Among males, Blacks were less likely to have earnings than Whites or persons of Hispanic origin (33 percent of Blacks had no earnings, compared with approximately 20 percent of Whites and Hispanics). Among women, 52 percent of persons of Hispanic origin were nonearners, compared with 43 percent of Whites and Blacks.

Persons not covered by private health insurance, persons receiving benefits from an assistance program, and persons with a work disability were less likely to receive earnings than other persons. Among males, for example, 47 percent of those not covered by private health insurance, 60 percent of those living in a household that received food stamps, and 56 percent of those who had a work disability received no earnings. (The latter figures were not statistically different.)

Table H. Percent of Persons With No Earnings

(No earnings in month prior to interview)

Characteristic	Male	Female
Persons 21 to 64 years	20.0	43.3
Age		
21 to 29 years	19.0	36.7
30 to 34 years	15.3	39.0
35 to 44 years	13.8	39.2
45 to 54 years	17.7	44.7
55 to 64 years	37.5	61.7
Marital Status		
Married, spouse present	16.2	48.1
Widowed	48.6	54.1
Divorced, separated, or married, spouse absent	26.5	32.1
Never married	27.2	29.8
Age of Youngest Child		
Less than 3 years	11.3	56.8
3 to 5 years	11.3	50.0
6 to 12 years	11.8	42.9
13 years and over	15.7	38.6
No children	25.3	39.8
Race and Hispanic Origin		
White	18.5	43.2
Black	32.8	43.5
Hispanic[1]	21.6	52.1
Selected Statuses		
Covered by private health insurance	13.6	37.6
Not covered by private health insurance	46.8	67.5
Lives in food stamp household	60.3	73.8
Lives in public or subsidized housing	48.1	62.4
With a work disability	55.5	73.6

[1]Persons of Hispanic origin may be of any race.

MULTIVARIATE ANALYSIS OF THE EARNINGS GAP

The preceeding discussion focused on lifetime work experience and earnings differentials between men and women. The descriptive material shows that females are more likely than males to have experienced a work interruption (primarily because of family reasons) and they tend to have less general and specific work experience. A substantial amount of research in the economic literature has examined earnings differentials by race and sex (Becker, 1971; Blinder, 1973; Corcoran and Duncan, 1979; Mincer and Polachek, 1975; Oxaca, 1973). Much of the research is based on the human capital theory which argues that wages are primarily determined by productivity related characteristics such as formal education and on the job training (Becker, 1971; Mincer, 1974). Researchers have argued that because women have more labor force interruptions because of childbearing and family reasons, women expect to be out of the labor force and invest less in human capital or defer investments until they reenter the labor force. In addition, time away from the labor force results in depreciation of existing human capital (Corcoran and Duncan, 1979; Mincer and Polachek, 1974).

Empirical studies have attempted to decompose the male-female earnings differential into several components: a portion attributable to differences in productivity related characteristics, such as education or experience, a portion attributable to differences in market rates of return to those characteristics, and a remaining unexplained residual. (Blinder, 1973; Corcoran and Duncan, 1979; Oxaca, 1973). The results of any given study of the percent of the male-female differential explained by productivity related factors depends on the specification of the model and the information available to estimate the wage relationship. Several studies have taken advantage of improved or unique data on labor force experience and training available from the National Longitudinal Survey (NLS) and the Panel Study of Income Dynamics (PSID). For example, Corcoran and Duncan (1979) used the PSID retrospective data on experience, interruptions, and training or job choice to analyze wage differentials and the depreciation hypothesis. Mincer and Ofek (1982) used longitudinal data from the NLS to examine the depreciation hypothesis using reentrants to the labor force. Salvo and McNeil (1984) used data from Income Survey Development Program (ISDP) on lifetime labor force attachment to analyze wage differentials.[1] Stevens and Herriot (1975) examined the effect of lifetime work experience on earnings by matching data from the Current Population Survey with data from longitudinal Social Security earnings and employment records. Other studies have specified models which incorporate differences in preferences and preparation for various types of work. For example, Daymont and Andraisani (1984), used the NLS data on indicators of various dimensions of job content and rewards and on major field of study prior to labor market entry to examine the male-female wage differentials of recent college graduates.

The material below describes an earnings model that is based primarily on a human capital theory of earnings determination but which also includes certain variables related to the job or occupation at which the person works. The human capital variables include the experience variables described in the first section, a set of schooling variables, and certain other variables such as health status and marital status. The variables that are related to the job or occupation include firm size, whether covered by a union contract, whether employed in the private sector, and the proportion of females in the occupation at which the person works.

The earnings model that is presented here is not intended to be definitive. The determination of wages is a complex process that depends on factors that could not be fully captured in this model. For example, the model does not attempt to measure the effect of ability, preferences for certain types of nonmoney renumeration, or the effect of physical capital differences among industries.

An Earnings Model

The model presented in this section is based on personal history data from the third wave of the 1984 SIPP panel. The dependent variable of the model is the log of hourly earnings. The independent variables are primarily taken from the supplementary questions asked in the third wave of the 1984 panel. The universe for the study is full-time workers 21 to 64 years of age who received wage or salary income in the month prior to the interview. The material above describes the work experience data collected in those interviews, but information was also obtained on several dimensions of educational attainment (number of school years completed, types of courses taken in high school, whether a high school diploma was received, the highest college degree received, and the field of college study). In addition, data were obtained on other variables thought to be associated with earnings such as health status, firm size, and whether covered by a union contract.

The model was estimated separately for males and females, and, because there are likely to be interaction effects between education and other variables, the model was estimated separately for (a) persons who did not complete high school, (b) persons who completed high school but not college, and (c) persons who completed college.

Because occupation and earnings are jointly determined, occupation is not included as one of the independent variables that explain the levels of earnings. There are two aspects of occupation, however, that enter into the models. First, because education variables do not fully capture the training and skill required for certain trades (e.g. electrician, carpenter, plumber), a SKILL variable has been entered into the equations that were estimated for persons who did not complete high school. The SKILL variable differentiates between persons in precision production, craft, and repair occupations and persons in other occupations. A second variable related to occupation, PERCENT FEMALE, measures the percent of persons in each occupation who are

[1] The ISDP was a research panel for SIPP which collected similar information on work experience. There were, however, some differences between the two surveys. SIPP includes data on job tenure, occupational tenure and union membership not available in ISDP. In addition, there were changes in the questions regarding work interruptions. For a discussion of these differences, see Lamas, McNeil and Haber (1986).

female. Females have an occupational structure much different from males and they tend to be in occupations with low earnings. It is hypothesized that, regardless of sex, persons in female-dominated occupations will have lower earnings than persons in integrated or male-dominated occupations.

Table I shows the coefficients and "t" ratios for the model. The effect of experience is measured by (a) the number of years with a current employer, (b) the number of years spent in the same occupation with different employers, and (c) the number of years spent in the labor force outside a current occupation.

Table I. Coefficients of the Earnings Model

(Dependent variable is log of hourly earnings, universe is full-time workers, "t" statistics shown in parentheses)

Variable	Not a high school graduate		High school graduate		College graduate	
	Male	Female	Male	Female	Male	Female
1. JOBTENUR (number of years with current employer)	.0203 (4.8)	.0377 (5.8)	.0237 (10.2)	.0272 (11.3)	.0365 (7.3)	.0334 (5.7)
2. JOBTENURSQ	-.00029 (-2.6)	-.00097 (-4.7)	-.00037 (-5.7)	-.00039 (-5.6)	-.00060 (-3.6)	-.00062 (-2.9)
3. POCCEXP (years in current occupation less years with current employer)	.0143 (3.4)	-.0076 (-1.1)	.0186 (6.4)	.0122 (3.6)	.0214 (4.5)	.0197 (3.0)
4. POCCEXPSQ	-.00030 (-2.0)	.00031 (1.2)	-.00043 (-3.6)	-.00025 (-1.7)	-.00047 (-2.5)	-.00075 (-2.4)
5. PWORKEXP (years of work experience less years in current occupation)	.0063 (1.9)	-.0066 (-2.2)	.0069 (4.1)	.0071 (3.8)	.0106 (3.3)	.0002 (0.0)
6. PWORKEXPSQ	-.00026 (-2.6)	.00015 (2.2)	-.00008 (-1.9)	-.00014 (-2.9)	-.00021 (-2.4)	-.00005 (-0.6)
7. FT (has usually worked full time)	.0903 (1.3)	.0974 (1.7)	.0709 (1.4)	.1106 (3.8)	.0983 (1.6)	.0508 (1.2)
8. MS1 (married, spouse present)	.0288 (0.7)	-.0032 (-0.1)	.0378 (1.7)	.0167 (0.9)	.0363 (0.7)	-.0229 (-0.6)
9. MS3 (never married)	-.2065 (-4.2)	-.0327 (-0.5)	-.0907 (-3.4)	-.0198 (-0.8)	-.0993 (-1.8)	-.0306 (-0.7)
10. MET1 (metropolitan area of 1 million or more)	.2053 (6.9)	.1802 (4.4)	.1696 (9.4)	.2171 (11.1)	.1844 (5.0)	.1849 (4.9)
11. MET2 (metropolitan area of less than 1 million)	.0627 (2.2)	.0818 (2.1)	.0855 (4.8)	.1027 (5.3)	.0621 (1.7)	.0411 (1.1)
12. UNION (covered by a union contract)	.1766 (6.3)	.1300 (3.3)	.0909 (5.9)	.0851 (4.1)	-.0299 (0.8)	.0193 (0.5)
13. SKLBLUE (precision production, craft, or repair occupation)	.1913 (5.5)	.1023 (1.4)	(NA)	(NA)	(NA)	(NA)
14. OTHBLUE (other blue-collar category)	.0737 (2.5)	-.0430 (-1.2)	(NA)	(NA)	(NA)	(NA)
15. PCTFEM (percent of workers in occupation who were female)	-.2409 (-3.6)	-.3397 (-5.7)	-.2250 (-6.8)	-.2113 (-8.0)	-.1890 (-3.1)	-.4174 (-7.5)
16. FIRMSZ1 (25-99 persons employed by firm)	.0805 (2.2)	.2165 (3.7)	.1300 (5.3)	.0651 (2.4)	.1703 (3.6)	.0226 (0.4)
17. FIRMSZ2 (100-499 persons employed by firm)	.1048 (2.7)	.2091 (3.9)	.1512 (6.0)	.1347 (5.2)	.1508 (3.3)	.1478 (3.2)
18. FIRMSZ3 (500-999 persons employed by firm)	.0799 (1.5)	.2123 (3.1)	.2021 (6.1)	.1473 (4.5)	.1946 (3.4)	.1594 (2.9)
19. FIRMSZ4 (1,000 or more persons employed by firm)	.1434 (4.6)	.3315 (7.1)	.2291 (11.6)	.1659 (7.8)	.2245 (5.9)	.1626 (3.9)
20. PSECTOR (employed in private sector)	.0967 (2.3)	.0341 (0.5)	.0703 (3.1)	.0425 (1.9)	.0617 (1.8)	-.0713 (-2.0)
21. FED (employed by Federal government)	.2229 (2.2)	.1142 (0.8)	.0838 (2.2)	.0770 (1.9)	.0972 (1.8)	-.0526 (-0.8)
22. INVOL (involuntarily left last job)	-.0230 (-0.6)	.0645 (1.3)	-.0477 (-2.2)	.0541 (2.0)	-.0146 (-0.3)	.0005 (0.0)
23. BETWEEN (time spent between current and last job)	.0008 (0.1)	.0013 (0.2)	-.0538 (-4.4)	-.0100 (-3.6)	-.0269 (-1.6)	-.0043 (-0.9)

Table I. Coefficients of the Earnings Model—Continued

(Dependent variable is log of hourly earnings, universe is full-time workers, "t" statistics shown in parentheses)

Variable	Not a high school graduate		High school graduate		College graduate	
	Male	Female	Male	Female	Male	Female
24. BLACK	-.1671 (-4.8)	-.1366 (-3.0)	-.2156 (-9.1)	-.0793 (-3.5)	-.0756 (-1.3)	-.0309 (-0.7)
25. OTHER	-.2247 (-3.3)	.0517 (0.7)	-.0630 (-1.5)	-.0077 (-0.2)	-.0904 (-1.4)	.0104 (0.2)
26. SPAN	-.1074 (-2.9)	-.0206 (-0.4)	-.0508 (-1.5)	-.1136 (-3.2)	-.1044 (-0.7)	.0111 (0.1)
27. DISAB (with a work disability)	-.0528 (-1.5)	-.0963 (-1.9)	-.0694 (-2.5)	-.0689 (-2.0)	-.0622 (-1.0)	-.2004 (-2.9)
28. HEALTH (perceived health status is very good or excellent)	.0831 (3.5)	.0714 (2.2)	.0519 (3.4)	.1127 (7.0)	.0390 (1.1)	.0440 (1.4)
29. KLT6 (youngest child less than 6)	.0294 (1.3)	-.0111 (-0.3)	-.0219 (-1.6)	.0107 (0.6)	-.0006 (0.0)	.0391 (1.3)
30. K6T17 (youngest child 7 to 17)	.0060 (0.5)	-.0162 (-1.0)	.0228 (2.9)	.0021 (0.2)	.0212 (1.6)	-.0161 (-1.0)
31. CURRIC (took academic program in high school)	(NA)	(NA)	.0367 (2.2)	-.0047 (-0.3)	.0572 (1.8)	.0645 (1.8)
32. HSCOURSES (number of math, science, and foreign language classes in high school)	(NA)	(NA)	.0281 (4.9)	.0364 (5.8)	.0365 (2.6)	.0243 (1.8)
33. PRVTHS (attended private high school)	(NA)	(NA)	.0085 (0.3)	.0406 (1.6)	.0309 (0.9)	-.0056 (-0.2)
34. MASTERS (obtained master's degree)	(NA)	(NA)	(NA)	(NA)	.1393 (4.3)	.1343 (4.0)
35. PHD (obtained doctorate)	(NA)	(NA)	(NA)	(NA)	.1353 (2.5)	.3400 (3.8)
36. FLDSTDY1 (college field was law, medicine, or dentistry)	(NA)	(NA)	(NA)	(NA)	.2099 (3.3)	-.0649 (-0.7)
37. FLDSTDY2 (college field was math or science)	(NA)	(NA)	(NA)	(NA)	.1417 (3.3)	.0106 (0.2)
38. FLDSTDY3 (college field was business or economics)	(NA)	(NA)	(NA)	(NA)	.2182 (6.6)	.0638 (1.6)
39. FLDSTDY4 (college field was engineering)	(NA)	(NA)	(NA)	(NA)	.2783 (6.6)	.0665 (0.8)
40. FLDSTDY5 (college field was education)	(NA)	(NA)	(NA)	(NA)	.0656 (1.4)	.0187 (0.5)
41. FLDSTDY6 (college field was nursing, pharmacy, or health technologies)	(NA)	(NA)	(NA)	(NA)	.1686 (1.6)	.2045 (4.1)
42. FLDSTDY7 (college field was technical or vocational)	(NA)	(NA)	(NA)	(NA)	.0231 (0.3)	-.1858 (-1.4)
43. CONSTANT	1.3212	1.2354	1.5010	1.2630	1.3902	1.7556
Number of cases	1,414	804	4,414	3,288	2,339	1,463
R^2	.34	.32	.26	.24	.25	.26
Mean hourly earnings	$8.05	$5.66	$10.16	$7.01	$13.92	$9.99

The control groups for the above model were made up of (a) persons who were divorced, widowed, or separated, (b) persons in nonmetropolitan areas, (c) persons not covered by a union contract, (d) Whites, (e) non-Spanish origin persons, (f) persons with no work disability, (g) persons with perceived health status other than very good or excellent, (h) persons with no children, (i) persons who usually worked at part-time jobs during their work life, (j) persons employed by a firm with fewer than 25 employees and (k) persons who left their last job voluntarily. For persons who did not finish high school, white collar workers were also used as a control group. Additional control groups for high school and college graduates included persons who did not take an academic curriculum in high school and persons who attended a public high school. For college graduates, other additional control groups included those who received a Bachelor's degree and those whose field of study was other than those listed in FLDSTDY1-FLDSTDY6.

Other variables related to experience include a measure of whether the person usually worked at full time jobs during his or her time in the labor force and the time that elapsed between the start of his or her current job and the end of the previous job.

For high school graduates, three education variables were added: (a) whether his or her high school program was academic or college preparatory, (b) the number of high school courses in algebra, trigonometry or geometry, chemistry or physics, and

foreign languages, and (c) whether he or she attended a private high school. These variables were also included in the model for college graduates, and, in addition, variables were added on highest degree and field of study. For the purpose of studying the effect of the latter variable, fields of study were grouped into eight categories; (a) law, medicine, or dentistry, (b) science or mathematics, (c) business or economics, (d) engineering, (e) education, (f) nursing, pharmacy, or health technologies, (g) vocational or technical studies, and (h) other.

A look at the coefficients in table I suggests that the method used to create the experience variables is appropriate. For five of the six sex and age groups, there is a consistent and plausible relationship among the three major measures; current tenure, previous occupational experience, and other work experience. The coefficients are positive and of descending importance. In the sixth group, females who did not graduate from high school, the results are less satisfactory. The current job tenure variable is strongly positive but the variable "years of work experience less years in current occupation" has a negative coefficient that is significant.

Variables other than those related to experience were also significant. Living in a large metropolitan area had a positive effect on earnings. For non-high school graduates, working at a skilled trade had a positive effect on earnings as did being covered by a union contract for those who were not college graduates. Occupational structure, as measured by the percent of persons in the occupation who were female had a large effect on earnings.

For each sex and age group, there was a strong negative relationship between wage rates and the relative number of females in the occupation. A perceived health status variable (equal to one if the person's health was very good or excellent) was positive and was significant for four of the six groups (those who were not college graduates). Being Black had a strong negative effect on the earnings of high school graduates and those who did not finish high school, but race and ethnicity variables were not significant for college graduates.

The number of math, science, and foreign language courses taken in high school had a positive effect on the earnings of high school graduates, and the highest degree received had a signifi-

Table J. Mean Values of Independent Variables of the Earnings Model

	Not a high school graduate		High school graduate		College graduate	
	Male	Female	Male	Female	Male	Female
1. JOBTENUR	11.02	8.00	9.73	7.19	8.46	6.72
2. POCCTENUR	3.53	2.27	2.74	2.21	2.82	2.37
3. PWORKEXP	9.98	8.28	8.11	6.14	7.77	5.25
4. FT	.97	.92	.98	.93	.96	.89
5. MS1	.77	.59	.72	.59	.74	.55
6. MS6	.12	.08	.17	.17	.19	.28
7. MET1	.38	.39	.41	.42	.50	.49
8. MET2	.32	.31	.36	.35	.35	.33
9. UNION	.31	.24	.32	.17	.17	.20
10. SKLBLUE	.28	.06	(NA)	(NA)	(NA)	(NA)
11. OTHBLUE	.43	.39	(NA)	(NA)	(NA)	(NA)
12. PCTFEM	.17	.61	.21	.68	.30	.61
13. FIRMSZ1	.16	.12	.13	.12	.12	.12
14. FIRMSZ2	.13	.18	.12	.15	.15	.19
15. FIRMSZ3	.06	.08	.05	.07	.07	.10
16. FIRMSZ4	.40	.45	.51	.50	.53	.46
17. PSECTOR	.90	.92	.85	.83	.72	.59
18. FED	.02	.02	.05	.04	.07	.04
19. INVOL	.14	.11	.12	.09	.07	.05
20. BETWEEN	.20	.70	.15	.68	.19	.70
21. BLACK	.14	.16	.09	.14	.05	.10
22. OTHER	.03	.04	.02	.02	.04	.04
23. SPAN	.13	.12	.04	.04	.03	.02
24. DISAB	.12	.12	.06	.05	.04	.04
25. HEALTH	.48	.39	.70	.66	.84	.79
26. XLT6	.25	.17	.25	.18	.28	.15
27. X6T17	.63	.67	.57	.53	.61	.42
28. CURRIC	(NA)	(NA)	.30	.30	.75	.78
29. HSCOURSES	(NA)	(NA)	1.94	1.84	3.26	3.18
30. PRVTHS	(NA)	(NA)	.08	.09	.15	.15
31. MASTERS	(NA)	(NA)	(NA)	(NA)	.19	.23
32. PHD	(NA)	(NA)	(NA)	(NA)	.09	.03
33. FLDSTDY1	(NA)	(NA)	(NA)	(NA)	.06	.03
34. FLDSTDY2	(NA)	(NA)	(NA)	(NA)	.11	.06
35. FLDSTDY3	(NA)	(NA)	(NA)	(NA)	.27	.17
36. FLDSTDY4	(NA)	(NA)	(NA)	(NA)	.13	.02
37. FLDSTDY5	(NA)	(NA)	(NA)	(NA)	.09	.30
38. FLDSTDY6	(NA)	(NA)	(NA)	(NA)	.01	.09
39. FLDSTDY7	(NA)	(NA)	(NA)	(NA)	.03	.01

(NA) Not applicable.
- Rounds to zero.

cant effect on the earnings of college graduates. Those males whose major field of study was law, medicine, dentistry, math, science, business, economics, or engineering had, other things being equal, higher earnings than those in other fields, but among female college graduates, only one field of study (nursing, pharmacy, or health technologies) was significantly higher than the control group.

The data in table I show the effect of variables on earnings levels. The data in table J show how males and females differ in the characteristics that affect earnings.

Among non-high-school graduates, 28 percent of males but only 6 percent of females worked at an occupation that was in the "precision production, craft, and repair category."

The difference between men and women in occupational patterns is apparent in table J. Among high school graduates, for example, the average male worked in an occupation that was 21 percent female; the average female worked in an occupation that was 68 percent female. This pattern was similar for the other two education groups.

Another notable difference between males and females is in the field of study of college graduates. The proportions in the various fields were as follows:

Field of study	Percent in field	
	Males	Females
Law, medicine, or dentistry	6	3
Science or mathematics	11	6
Business or economics	27	17
Engineering	13	2
Education	9	30
Nursing, pharmacy, or health technologies	1	9
Vocational or technical studies	3	1

Proportion of the Earnings Gap Accounted for by Differences in Characteristics

Table K shows the proportion of the earnings gap accounted for by differences between the sexes in the mean values of the independent variables. The figures are calculated by multiplying both the male and female mean values by the male coefficients.

Differences between males and females in experience variables accounted for 22 perent of the earnings gap among high school and college graduates and about 14 percent for those who didn't finish high school.

Among college graduates, field of study accounted for 12 percent of the gap. Among those who didn't finish high school, being employed at a skilled trade accounted for 13 percent of the gap. Occupational structure (the existence of male and female dominated occupations) accounted for 30 percent of the earnings gap among those without a college degree and 17 percent of the gap among college graduates.

Table K. Proportion of Male-Female Earnings Differential Accounted for by Differences in the Mean Values of the Independent Variables

(Based on coefficients for males)

Characteristic	Not high school graduates	High school graduates	College graduates
Experience[1]	.139	.222	.226
Schooling[2]	(NA)	.008	.127
Field of study	(NA)	(NA)	.116
Skilled trades[3]	.129	(NA)	(NA)
Occupational structure[4]	.303	.300	.174
Other characteristics[5]	.024	.071	.128
All characteristics	.595	.601	.655
Residual	.405	.399	.345

[1]Number of years with current employer, years in current occupation less years with current employer, years of work experience less years in current occupation, whether usually worked full-time during work years, length of time between current and previous job.

[2]Type of high school program, number of math, science, and foreign language courses in high school, whether public or private high school (high school and college graduates); highest degree and field of study (college graduates).

[3]Whether in precision production, craft, or repair occupation.

[4]Percent of persons in occupation who are female.

[5]Marital status, type of geographic area, whether covered by a union contract, size of firm, class of worker, whether involuntarily left last job, race and Hispanic origin, disability and health status, presence of children.

Overall, differences in mean values accounted for between 60 and 66 percent of the male-female earnings gap. The residual represents earnings differences that were not accounted for by occupational structure or by differences in the other independent variables in the model. This means that approximately 40 percent of the earnings gap was not accounted for by male-female differences in the independent variables included in the model. The remaining wage gap may reflect unmeasured differences in the productivity-related characteristics of individuals, it may reflect differences in nonmoney compensation, or it may reflect wage differentials that are based on factors other than productivity.

The model presented above is based on a rich source of data, but the model itself should be viewed as a work in progress. There may be more useful ways of specifying some of the variables and the list of variables may be usefully shortened or expanded. In some instances, it was not possible to develop a satisfactory variable from information collected in the survey. For example, analysis of the data on vocational training did not yield a way to define a usable independent variable.

The primary findings of the study include the following: (1) male-female differences in experience and education account for 14 to 35 percent of the earnings gap, (2) male-female differences in occupational patterns account for 17 to 30 percent, and (3) approximately 35 to 41 percent was not accounted for by measured differences in human capital characteristics or by measured aspects of occupational structure.

SELECTED REFERENCES

Becker, Gary S. *The Economics of Discrimination.* Chicago: University of Chicago Press, 1971.

Blinder, Alan S. "Wage Discrimination: Reduced Form and Structural Estimates." *Journal of Human Resources* 8 (Fall 1973): 436-55.

Corcoran, Mary and Greg J. Duncan. "Work History, Labor Force Attachment, and Earnings Differences Between the Races and Sexes." *Journal of Human Resources* 14 (Winter 1979): 3-20.

Daymont, Thomas N., and Paul J. Andrizani. "Job Preferences, College Major, and the Gender Gap in Earnings." *Journal of Human Resources* (Summer 1984): 408-428.

Lamas, Enrique, John McNeil, and Sheldon Haber. "Lifetime Labor Force Attachment: Retrospective Data from the Survey of Income and Program Participation." *1986 Proceedings of the Social Statistics Section,* American Statistical Association, 1986.

McNeil, John, Enrique Lamas, and Sheldon Haber. "Job Tenure, Lifetime Work Interruptions and Wage Differentials." Paper presented at the 56th Annual Conference of the Southern Economic Association, November 1986.

Mincer, Jacob, and Haim Ofek. "Interrupted Work Careers: Depreciation and Restoration of Human Capital." *Journal of Human Resources* 17 (Spring 1982): 3-24.

Mincer, Jacob. *Schooling, Experience and Earnings.* New York: Columbia University Press, 1974.

Mincer, Jacob, and Solomon Polachek. "Family Investments in Human Capital: Earnings of Women." *Journal of Political Economy* 8 (March/April 1974): S76-108.

Oaxaca, Ronald L. "Male-Female Wage Differentials in Urban Labor Markets." *International Economic Review* 14 (October 1973): 693-709.

Salvo, Joseph J. and John M. McNeil. *Lifetime Work Experience and Its Effects on Earnings: Retrospective Data from the 1979 Income Survey Development Program.* U.S. Bureau of the Census, Current Population Reports. Series P-23, No. 136, U.S. Government Printing Office, Washington, D.C., 1984.

Stevens, Joyce A. and Roger A. Herriot. "Current Earnings Differentials of Men and Women: Some Exploratory Regression Analyses." *1975 Proceedings of the Social Statistics Section,* American Statistical Association, 1975.

Table 1. Workers with One or More Work Interruptions Lasting Six Months or Longer, by Reason for Interruption

(Numbers in thousands. For meaning of symbols, see text)

Characteristic	Total	Percent with one or more interruptions				
		All reasons	Inability to find work	Family reasons	Illness or disability	Other reason not specified
WORKERS 21 TO 64 YEARS OLD						
Male	44 195	13.2	7.9	3	2.2	3.4
Female	35 576	47.0	4.2	40.7	2.3	3.5
AGE BY YEARS OF SCHOOL COMPLETED						
Workers 21 to 29 years old:						
Male	13 549	11.5	8.6	1	1.1	2.0
Female	11 381	19.9	4.4	13.5	.6	2.3
Completed less than 12 years:						
Male	1 931	22.3	16.7	7	1.9	4.1
Female	958	34.5	5.7	25.5	.8	3.8
Completed 12 to 15 years:						
Male	9 178	11.0	8.3	1	.9	1.9
Female	8 086	21.6	4.6	15.1	.7	2.4
Completed 16 years and over:						
Male	2 441	5.0	3.3	-	1.0	.8
Female	2 337	8.1	3.1	3.3	.5	1.6
Workers 30 to 44 years old:						
Male	17 989	14.1	8.5	4	2.2	3.6
Female	14 255	53.1	4.7	46.0	2.7	3.7
Completed less than 12 years:						
Male	2 494	20.8	12.9	5	4.5	4.4
Female	1 719	65.2	9.7	51.1	6.8	4.6
Completed 12 to 15 years:						
Male	10 118	14.8	9.1	3	2.4	3.5
Female	9 125	57.0	4.3	50.8	2.5	3.7
Completed 16 years and over:						
Male	5 377	9.7	5.3	6	.9	3.4
Female	3 411	36.7	3.2	30.5	1.3	3.4
Workers 45 to 64 years old:						
Male	12 657	13.6	6.4	2	3.2	4.5
Female	9 940	69.2	3.2	64.2	3.6	4.6
Completed less than 12 years:						
Male	3 373	18.2	8.9	1	4.1	3.8
Female	2 450	65.7	4.5	58.5	5.4	5.5
Completed 12 to 15 years:						
Male	6 564	13.8	6.1	2	3.0	5.2
Female	5 997	72.0	3.0	67.6	3.2	4.2
Completed 16 years and over:						
Male	2 721	9.8	4.0	2	2.3	3.6
Female	1 493	63.2	1.9	60.0	2.3	4.3
OCCUPATION						
Managerial or professional:						
Male	10 523	7.2	3.9	2	1.0	2.4
Female	8 452	39.7	2.3	34.6	1.9	2.7
Technical, sales, or administrative support:						
Male	8 859	9.3	6.4	2	1.5	1.9
Female	16 117	46.6	3.7	41.6	1.9	3.1
Sevice:						
Male	3 894	18.0	9.7	7	3.8	5.5
Female	5 758	54.5	5.4	45.6	3.7	3.9
Farm, forestry, or fisheries:						
Male	984	15.1	11.2	-	1.0	3.8
Female	143	(B)	(B)	(B)	(B)	(B)
Precision production, craft, or repair:						
Male	8 473	14.2	6.5	2	2.4	3.7
Female	821	48.1	5.3	39.9	1.0	6.5
Operators, laborers:						
Male	10 462	19.0	11.8	2	3.1	4.8
Female	4 285	52.5	7.8	42.8	2.9	5.1
DISABILITY STATUS						
With a work disability:						
Male	3 092	29.5	11.3	5	15.4	4.9
Female	2 166	65.9	4.4	55.2	13.0	5.2
No work disability:						
Male	41 104	11.9	7.7	2	1.2	3.2
Female	33 411	45.8	4.1	39.8	1.6	3.4

Table 2. Full-time Workers with One or More Work Interruptions Lasting Six Months or Longer, by Reason for Interruption

(Numbers in thousands. For meaning of symbols, see text)

Characteristic	Total	Percent with one or more interruptions				
		All reasons	Inability to find work	Family reasons	Illness or disability	Other reason not specified
FULL-TIME WORKERS 21 TO 64 YEARS OLD						
Male	40 213	12.1	7.4	2	1.8	3.2
Female	26 234	42.0	3.9	35.8	2.4	3.3
AGE BY YEARS OF SCHOOL COMPLETED						
Workers 21 to 29 years old:						
Male	11 577	10.4	8.1	1	.6	1.6
Female	8 471	16.5	4.1	10.8	.6	1.9
Completed less than 12 years:						
Male	1 687	19.9	15.9	.6	1.1	3.3
Female	642	29.0	5.6	20.7	-	2.3
Completed 12 to 15 years:						
Male	7 752	9.7	7.6	1	.5	1.6
Female	5 934	18.0	4.2	12.1	.7	2.0
Completed 16 years and over:						
Male	2 139	5.0	3.5	-	.8	.7
Female	1 895	7.4	3.3	2.5	.6	1.3
Workers 30 to 44 years old:						
Male	16 625	13.0	7.8	.4	1.8	3.5
Female	10 579	46.5	4.3	39.1	2.9	3.9
Completed less than 12 years:						
Male	2 173	18.1	10.9	.6	3.3	4.4
Female	1 194	58.5	8.3	46.0	6.7	4.4
Completed 12 to 15 years:						
Male	9 518	13.7	8.5	.3	1.9	3.5
Female	6 635	51.0	4.1	44.1	2.8	3.7
Completed 16 years and over:						
Male	5 234	9.4	5.2	.6	.8	3.3
Female	2 750	30.3	2.9	24.0	1.4	3.5
Workers 45 to 64 years old:						
Male	11 711	12.5	6.2	1	2.8	4.0
Female	7 184	65.5	3.1	60.5	3.8	4.2
Completed less than 12 years:						
Male	3 038	15.3	6.8	-	3.7	3.5
Female	1 736	62.2	3.7	55.6	5.8	4.6
Completed 12 to 15 years:						
Male	6 072	12.4	5.8	1	2.7	4.4
Female	4 168	68.2	3.1	62.4	3.5	4.3
Completed 16 years and over:						
Male	2 601	9.5	4.0	.3	2.2	3.7
Female	1 280	61.3	2.0	57.9	2.1	3.1
OCCUPATION						
Managerial or professional:						
Male	10 058	7.1	3.8	.2	1.0	2.4
Female	6 939	38.1	2.2	31.3	2.1	2.4
Technical, sales, or administrative support:						
Male	8 111	9.1	6.1	.1	1.1	1.9
Female	12 018	41.5	3.4	36.4	2.3	2.9
Sevice:						
Male	3 237	16.6	9.0	.6	3.3	4.6
Female	3 070	46.5	5.3	33.4	4.2	3.6
Farm, forestry, or fisheries:						
Male	809	10.4	7.0	-	1.2	2.7
Female	93	(B)	(B)	(B)	(B)	(B)
Precision production, craft, or repair:						
Male	9 863	13.4	8.2	.3	2.1	3.3
Female	888	43.1	5.0	34.9	1.2	5.7
Operators, laborers:						
Male	9 136	17.5	11.1	.2	2.4	4.6
Female	3 477	49.7	7.4	40.1	3.0	5.3
DISABILITY STATUS						
With a work disability:						
Male	2 574	24.8	10.7	.3	11.8	4.1
Female	1 382	61.5	2.8	50.9	14.4	4.2
No work disability:						
Male	37 639	11.2	7.2	.2	1.1	3.1
Female	24 852	40.9	3.9	35.0	1.7	3.2

Table 3. Mean Percent of Potential Work-Years Spent Away from Work: All Workers and Full-Time Workers

(For meaning of symbols, see text)

Characteristic	All workers				Full-time workers			
	Male		Female		Male		Female	
	Mean	Standard error	Mean	Standard error	Mean	Standard error	Mean	Standard error
Workers 21 to 64 years old	1.6	.2	14.7	.6	1.3	.2	11.5	.6
AGE BY YEARS OF SCHOOL COMPLETED								
Workers 21 to 29 years old	2.3	.3	5.3	.5	1.8	.4	3.7	.4
Completed less than 12 years	3.3	.6	8.8	1.3	2.2	.5	6.5	1.6
Completed 12 to 15 years	2.2	.4	5.7	.6	1.8	.5	3.8	.4
Completed 16 years and over	2.0	1.0	2.6	.8	1.6	.9	2.3	.9
Workers 30 to 44 years old	1.6	.2	16.6	.5	1.2	.1	12.3	.5
Completed less than 12 years	2.6	.6	20.2	1.5	1.8	.4	16.3	1.8
Completed 12 to 15 years	1.5	.2	17.6	.6	1.3	.2	12.8	.6
Completed 16 years and over	1.2	.2	12.1	1.0	1.0	.2	9.5	1.0
Workers 45 to 64 years old	.9	.1	22.7	.6	.7	.1	19.5	.7
Completed less than 12 years	1.0	.2	19.2	1.3	.7	.2	16.9	1.5
Completed 12 to 15 years	.8	.1	24.1	.8	.6	.1	20.3	.9
Completed 16 years and over	.9	.5	23.0	1.7	.9	.5	20.4	1.8
RACE AND HISPANIC ORIGIN								
White	1.5	.2	15.7	.7	1.2	.2	12.2	.7
Black	2.4	.4	8.1	.8	2.2	.4	6.9	.8
Hispanic[1]	2.4	1.4	12.0	2.3	2.0	1.7	9.6	2.6
OCCUPATION								
Managerial or professional	.8	.2	12.6	.7	.8	.2	10.7	.6
Technical, sales, or administrative support	1.4	.4	14.8	.4	1.1	.4	11.4	.5
Sevice	2.6	.6	18.0	.8	2.4	.5	13.4	1.0
Farm, forestry, or fisheries	2.5	.7	(B)	(B)	1.7	.8	(B)	(B)
Precision production, craft, or repair	1.2	.1	13.7	1.7	.9	.1	10.9	1.7
Operators, laborers	2.4	.3	14.3	.8	1.9	.3	12.1	.8
DISABILITY STATUS								
With a work disability	3.9	.7	20.6	1.5	2.1	.4	16.0	1.8
No work disability	1.4	.1	14.3	.4	1.2	.2	11.3	.4

[1] Persons of Hispanic origin may be of any race.

Table 4. Earnings Per Hour, by Work Interruption Status: All Workers

(Work interruptions lasting 6 months or longer. For meaning of symbols, see text)

Characteristic	All interruption statuses		With one or more interruptions		With no interruption	
	Mean (dols.)	Standard error (dols.)	Mean (dols.)	Standard error (dols.)	Mean (dols.)	Standard error (dols.)
WORKERS 21 TO 64 YEARS OLD						
Male	10.53	.13	8.47	.32	10.76	.14
Female	7.13	.10	6.71	.15	7.44	.13
AGE BY YEARS OF SCHOOL COMPLETED						
Workers 21 to 29 years old:						
Male	7.87	.09	6.77	.30	7.96	.09
Female	6.42	.08	5.24	.14	6.64	.09
Completed less than 12 years:						
Male	6.44	.16	5.66	.35	6.59	.18
Female	5.00	.24	4.31	.21	5.30	.33
Completed 12 to 15 years:						
Male	7.62	.10	6.76	.26	7.70	.10
Female	6.00	.08	5.28	.15	6.15	.09
Completed 16 years and over:						
Male	9.95	.26	10.81	2.72	9.91	.25
Female	8.44	.24	6.90	.77	8.54	.25
Workers 30 to 44 years old:						
Male	11.31	.11	8.93	.24	11.60	.12
Female	7.65	.09	6.85	.13	8.40	.13
Completed less than 12 years:						
Male	7.94	.17	7.13	.36	8.09	.18
Female	5.39	.18	5.26	.24	5.56	.26
Completed 12 to 15 years:						
Male	10.48	.12	8.65	.28	10.71	.13
Female	7.06	.10	6.61	.14	7.60	.13
Completed 16 years and over:						
Male	14.43	.26	11.44	.67	14.68	.27
Female	10.33	.23	9.29	.37	10.85	.28
Workers 45 to 64 years old:						
Male	12.26	.16	9.26	.37	12.60	.17
Female	7.21	.10	6.98	.12	7.57	.17
Completed less than 12 years:						
Male	8.89	.19	8.00	.44	9.01	.20
Female	5.58	.16	5.62	.23	5.54	.21
Completed 12 to 15 years:						
Male	11.72	.18	8.75	.45	12.07	.19
Female	7.10	.12	6.83	.14	7.62	.20
Completed 16 years and over:						
Male	17.74	.45	13.95	1.39	18.03	.47
Female	10.30	.33	9.74	.40	11.10	.54
OCCUPATION						
Managerial or professional:						
Male	14.58	.19	12.15	.61	14.73	.20
Female	9.83	.12	9.45	.22	10.04	.15
Technical, sales, or administrative support:						
Male	10.63	.15	9.22	.53	10.73	.16
Female	6.92	.07	6.63	.11	7.13	.08
Sevice:						
Male	6.69	.13	5.88	.33	6.81	.14
Female	4.77	.09	4.55	.10	4.98	.15
Farm, forestry, or fisheries:						
Male	6.19	.26	5.31	.62	6.31	.26
Female	(B)	(B)	(B)	(B)	(B)	(B)
Precision production, craft, or repair:						
Male	10.29	.11	9.16	.29	10.42	.12
Female	7.01	.25	7.00	.36	7.01	.35
Operators, laborers:						
Male	8.42	.09	7.31	.19	8.61	.09
Female	5.90	.08	5.90	.12	5.89	.11
DISABILITY STATUS						
With a work disability:						
Male	9.35	.27	7.73	.45	9.66	.31
Female	6.24	.25	6.03	.35	6.57	.34
No work disability:						
Male	10.62	.09	8.61	.22	10.81	.09
Female	7.19	.06	6.77	.10	7.48	.08

Table 5. Earnings Per Hour, by Work Interruption Status: Full-time Workers

(Work interruptions lasting 6 months or longer. For meaning of symbols, see text)

Characteristic	All interruption statuses		With one or more interruptions		With no interruption	
	Mean (dols.)	Standard error (dols.)	Mean (dols.)	Standard error (dols.)	Mean (dols.)	Standard error (dols.)
WORKERS 21 TO 64 YEARS OLD						
Male	10.62	.14	6.86	.35	11.02	.15
Female	7.52	.11	7.11	.16	7.77	.14
AGE BY YEARS OF SCHOOL COMPLETED						
Workers 21 to 29 years old:						
Male	8.13	.09	6.95	.36	8.23	.09
Female	6.78	.09	5.56	.17	6.96	.10
Completed less than 12 years:						
Male	6.46	.17	5.60	.36	6.60	.19
Female	5.22	.20	4.35	.20	5.55	.28
Completed 12 to 15 years:						
Male	7.88	.10	6.88	.29	7.96	.10
Female	6.32	.09	5.57	.17	6.44	.10
Completed 16 years and over:						
Male	10.37	.27	12.01	3.16	10.31	.25
Female	8.74	.27	7.80	.97	8.79	.28
Workers 30 to 44 years old:						
Male	11.49	.12	9.17	.26	11.76	.13
Female	7.99	.10	7.11	.14	8.62	.14
Completed less than 12 years:						
Male	7.96	.17	6.85	.36	8.15	.19
Female	5.74	.19	5.57	.23	5.94	.31
Completed 12 to 15 years:						
Male	10.61	.13	8.81	.28	10.81	.14
Female	7.32	.10	6.82	.16	7.75	.13
Completed 16 years and over:						
Male	14.56	.26	11.72	.70	14.79	.27
Female	10.58	.25	9.59	.41	10.95	.30
Workers 45 to 64 years old:						
Male	12.51	.16	9.90	.40	12.78	.17
Female	7.71	.11	7.52	.14	7.98	.18
Completed less than 12 years:						
Male	8.94	.19	7.99	.45	9.06	.20
Female	5.87	.18	5.82	.24	5.93	.27
Completed 12 to 15 years:						
Male	11.95	.18	9.82	.48	12.16	.19
Female	7.62	.13	7.36	.16	8.03	.22
Completed 16 years and over:						
Male	18.00	.46	14.05	1.48	18.29	.47
Female	10.58	.31	10.25	.35	11.01	.54
OCCUPATION						
Managerial or professional:						
Male	14.74	.19	12.53	.63	14.88	.20
Female	9.94	.13	9.58	.20	10.11	.16
Technical, sales, or administrative support:						
Male	10.96	.16	9.60	.59	11.05	.16
Female	7.29	.07	7.02	.12	7.43	.09
Sevice:						
Male	7.10	.15	6.38	.43	7.20	.16
Female	4.92	.11	4.71	.13	5.07	.16
Farm, forestry, or fisheries:						
Male	6.26	.26	5.67	.81	6.31	.27
Female	(B)	(B)	(B)	(B)	(B)	(B)
Precision production, craft, or repair:						
Male	10.30	.11	9.13	.29	10.43	.11
Female	7.15	.27	7.04	.39	7.23	.37
Operators, laborers:						
Male	8.81	.09	7.54	.20	8.79	.10
Female	6.03	.09	5.67	.13	6.15	.12
DISABILITY STATUS						
With a work disability:						
Male	9.75	.29	8.26	.49	10.12	.33
Female	6.56	.26	6.24	.35	6.97	.39
No work disability:						
Male	10.80	.09	6.95	.25	11.07	.10
Female	7.58	.07	7.19	.11	7.80	.08

Table 6. Tenure on Current Job and Years of Work Experience, by Race and Hispanic Origin

(Numbers in thousands. For meaning of symbols, see text)

Characteristic	All races		White		Black		Hispanic origin[1]	
	Male	Female	Male	Female	Male	Female	Male	Female
ALL WORKERS								
Total, 21 to 64 years old	44 105	35 578	38 869	30 287	3 990	4 293	2 455	1 684
TENURE ON CURRENT JOB								
Less than 2 years	9 722	9 117	8 470	7 889	902	924	678	526
2 to 4 years	10 046	10 363	8 827	8 922	853	1 147	661	485
5 to 9 years	6 596	7 962	7 624	6 766	642	1 019	507	358
10 years or more	15 831	9 104	13 947	6 710	1 593	1 202	608	314
YEARS OF WORK EXPERIENCE BY TENURE ON CURRENT JOB								
Experience less than 5 years	3 998	3 071	3 129	4 261	557	617	324	316
Less than 2 years	2 174	2 980	1 763	2 522	333	347	158	195
2 years or more	1 693	2 090	1 366	1 739	225	269	165	121
Experience 5 to 9 years	8 167	9 912	7 227	8 536	691	1 100	571	573
Less than 2 years	2 836	2 947	2 502	2 656	224	204	239	186
2 to 4 years	2 913	3 845	2 573	3 318	272	429	153	210
5 years or more	2 419	3 120	2 152	2 562	194	467	179	178
Experience 10 to 19 years	14 286	12 479	12 381	10 597	1 419	1 538	835	486
Less than 2 years	2 669	2 189	2 498	1 826	271	273	194	114
2 to 4 years	3 189	3 219	2 822	2 807	248	324	234	90
5 to 9 years	3 630	3 324	3 200	2 904	277	347	202	104
10 years or more	4 577	3 787	3 861	3 061	623	594	206	178
Experience 20 or more years	17 675	9 114	16 131	6 892	1 322	1 037	725	309
Less than 2 years	1 625	1 020	1 707	886	75	100	87	31
2 to 4 years	2 250	1 259	2 066	1 058	107	125	109	65
5 to 9 years	2 546	1 548	2 272	1 299	170	206	127	77
10 years or more	11 254	4 307	10 086	3 649	970	608	403	136
FULL-TIME WORKERS								
Total, 21 to 64 years old	44 105	35 578	38 869	30 287	3 990	4 293	2 455	1 684
TENURE ON CURRENT JOB								
Less than 2 years	8 623	7 446	7 744	6 414	776	778	643	385
2 to 4 years	9 651	9 483	8 715	8 162	844	1 060	643	489
5 to 9 years	9 662	9 359	7 865	7 054	707	1 045	521	417
10 years or more	16 529	10 279	14 544	8 658	1 662	1 410	647	393
YEARS OF WORK EXPERIENCE BY TENURE ON CURRENT JOB								
Experience less than 5 years	2 824	3 166	2 378	2 680	404	365	272	199
Less than 2 years	1 596	1 777	1 273	1 534	233	184	126	94
2 years or more	1 389	1 389	1 105	1 145	171	201	146	105
Experience 5 to 9 years	7 137	7 139	6 357	6 086	586	841	497	420
Less than 2 years	2 379	1 854	2 140	1 663	146	148	198	127
2 to 4 years	2 588	2 819	2 262	2 417	245	327	137	161
5 years or more	2 169	2 465	1 954	2 009	174	366	162	131
Experience 10 to 19 years	13 433	9 486	11 693	7 879	1 252	1 313	766	377
Less than 2 years	2 546	1 464	2 227	1 217	213	184	170	64
2 to 4 years	2 886	2 334	2 665	1 987	218	272	206	52
5 to 9 years	3 486	2 684	3 071	2 320	261	301	197	97
10 years or more	4 382	3 004	3 730	2 354	563	555	193	163
Experience 20 or more years	18 743	9 455	15 146	5 464	1 198	826	646	263
Less than 2 years	1 485	875	1 399	584	47	64	65	19
2 to 4 years	2 019	931	1 853	812	89	100	97	56
5 to 9 years	2 409	1 274	2 157	999	156	171	117	69
10 years or more	12 836	6 621	9 737	3 069	906	492	367	117

[1] Persons of Hispanic origin may be of any race.

Table 7. Percent Distribution of Workers, by Tenure on Current Job, Years of Work Experience, Race and Hispanic Origin

(For meaning of symbols, see text)

Characteristic	All races		White		Black		Hispanic origin[1]	
	Male	Female	Male	Female	Male	Female	Male	Female
ALL WORKERS								
Total, 21 to 64 years old	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
TENURE ON CURRENT JOB								
Less than 2 years	22.0	25.6	21.8	26.0	22.6	21.5	27.6	31.2
2 to 4 years	22.7	29.1	22.7	29.5	21.4	26.7	26.9	28.8
5 to 9 years	19.4	22.5	19.6	22.3	16.1	23.7	20.7	21.3
10 years or more	35.8	22.8	35.9	22.2	39.9	28.0	24.8	18.7
YEARS OF WORK EXPERIENCE BY TENURE ON CURRENT JOB								
Experience less than 5 years	8.8	14.3	8.1	14.1	14.0	14.4	13.2	18.8
Less than 2 years	4.9	8.4	4.5	8.3	8.3	8.1	6.4	11.6
2 years or more	3.8	5.9	3.5	5.7	5.6	6.3	6.7	7.2
Experience 5 to 9 years	18.5	27.9	18.6	28.2	17.3	25.6	23.3	34.0
Less than 2 years	6.4	8.3	6.4	8.8	5.6	4.8	9.7	11.0
2 to 4 years	6.6	10.8	6.6	11.0	6.8	10.0	6.2	12.5
5 years or more	5.5	8.8	5.5	8.5	4.9	10.9	7.3	10.5
Experience 10 to 19 years	32.3	35.1	31.9	35.0	35.6	35.8	34.0	28.8
Less than 2 years	6.5	6.1	6.4	6.0	6.8	6.4	7.9	6.8
2 to 4 years	7.2	9.0	7.3	9.3	6.2	7.6	9.5	5.3
5 to 9 years	8.2	9.3	8.2	9.6	7.0	8.1	8.2	6.2
10 years or more	10.4	10.6	9.9	10.1	15.6	13.8	8.4	10.6
Experience 20 or more years	40.4	22.8	41.5	22.8	33.1	24.2	29.5	18.3
Less than 2 years	4.1	2.9	4.4	2.9	1.9	2.3	3.5	1.8
2 to 4 years	5.1	3.4	5.3	3.5	2.7	2.9	4.4	3.8
5 to 9 years	5.8	4.4	5.8	4.3	4.3	4.8	5.2	4.6
10 years or more	25.5	12.2	25.9	12.0	24.3	14.2	16.4	8.1
FULL-TIME WORKERS								
Total, 21 to 64 years old	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
TENURE ON CURRENT JOB								
Less than 2 years	19.8	22.0	19.8	22.6	18.7	17.2	25.6	24.2
2 to 4 years	22.2	28.5	22.2	28.8	21.1	26.8	26.9	29.8
5 to 9 years	20.1	24.2	20.2	24.1	17.3	24.9	21.8	23.7
10 years or more	37.8	25.3	37.9	24.5	42.9	31.1	25.7	22.3
YEARS OF WORK EXPERIENCE BY TENURE ON CURRENT JOB								
Experience less than 5 years	7.3	12.1	6.7	12.1	11.8	11.4	12.5	15.8
Less than 2 years	3.9	6.8	3.6	6.9	6.8	5.5	5.8	7.5
2 years or more	3.4	5.3	3.1	5.2	5.0	6.0	6.7	8.3
Experience 5 to 9 years	17.7	27.2	17.9	27.5	16.5	25.0	22.8	33.4
Less than 2 years	5.9	7.1	6.0	7.5	4.3	4.4	9.1	10.1
2 to 4 years	6.4	10.7	6.4	10.9	7.2	9.7	6.3	12.8
5 years or more	5.4	9.4	5.5	9.1	5.1	10.9	7.4	10.4
Experience 10 to 19 years	33.3	36.2	32.9	35.6	36.6	39.0	35.1	30.0
Less than 2 years	6.3	5.6	6.3	5.5	6.2	5.5	7.8	5.1
2 to 4 years	7.4	8.9	7.5	9.0	6.3	8.1	9.5	4.2
5 to 9 years	8.7	10.2	8.6	10.5	7.6	8.9	9.0	7.7
10 years or more	10.9	11.5	10.5	10.6	16.4	16.5	8.8	13.0
Experience 20 or more years	41.6	24.6	42.6	24.7	35.0	24.6	29.6	20.9
Less than 2 years	3.7	2.6	3.9	2.6	1.4	1.9	3.0	1.5
2 to 4 years	5.0	3.6	5.2	3.7	2.6	3.0	4.5	4.5
5 to 9 years	6.0	4.6	6.1	4.5	4.6	5.1	5.4	5.5
10 years or more	26.9	13.8	27.4	13.9	26.5	14.6	16.8	9.3

[1] Persons of Hispanic origin may be of any race.

Table 8. Tenure on Current Job and Years of Work Experience, by Years of School Completed

(Numbers in thousands. For meaning of symbols, see text)

Characteristic	All educational categories		Under 12 years		12 to 15 years		16 years and over	
	Male	Female	Male	Female	Male	Female	Male	Female
ALL WORKERS								
Total, 21 to 64 years old	44 195	35 576	7 797	5 126	25 860	23 208	10 538	7 242
TENURE ON CURRENT JOB								
Less than 2 years	9 722	9 117	1 683	1 280	5 659	5 880	2 180	1 957
2 to 4 years	10 046	10 363	1 566	1 262	5 931	6 900	2 549	2 201
5 to 9 years	8 596	7 992	1 359	1 217	4 989	5 298	2 247	1 477
10 years or more	15 831	8 104	3 189	1 367	9 081	5 131	3 561	1 607
YEARS OF WORK EXPERIENCE BY TENURE ON CURRENT JOB								
Experience less than 5 years	3 868	5 071	622	758	2 345	3 317	901	995
Less than 2 years	2 174	2 980	326	454	1 318	1 890	530	637
2 years or more	1 693	2 090	295	304	1 027	1 427	371	359
Experience 5 to 9 years	8 167	9 912	1 223	1 169	5 164	6 663	1 779	2 080
Less than 2 years	2 835	2 947	420	294	1 807	1 961	607	692
2 to 4 years	2 913	3 845	414	393	1 792	2 564	707	888
5 years or more	2 419	3 120	389	482	1 565	2 138	464	499
Experience 10 to 19 years	14 286	12 479	1 847	1 492	8 563	8 151	3 876	2 836
Less than 2 years	2 889	2 169	452	268	1 720	1 392	717	510
2 to 4 years	3 189	3 219	429	330	1 846	2 103	914	785
5 to 9 years	3 630	3 324	364	411	2 122	2 153	1 144	759
10 years or more	4 577	3 767	601	483	2 875	2 503	1 101	782
Experience 20 or more years	17 875	6 114	4 106	1 706	9 787	5 077	3 982	1 331
Less than 2 years	1 825	1 020	484	264	1 014	637	326	118
2 to 4 years	2 250	1 209	428	235	1 266	805	557	169
5 to 9 years	2 546	1 548	606	324	1 302	1 007	639	218
10 years or more	11 254	4 337	2 588	884	6 205	2 628	2 461	825
FULL-TIME WORKERS								
Total, 21 to 64 years old	44 195	35 576	7 797	5 126	25 860	23 208	10 538	7 242
TENURE ON CURRENT JOB								
Less than 2 years	8 823	7 446	1 548	1 009	5 231	4 784	2 043	1 653
2 to 4 years	9 951	9 493	1 588	1 293	5 852	6 115	2 511	2 086
5 to 9 years	8 892	8 358	1 452	1 236	5 171	5 505	2 269	1 618
10 years or more	16 529	10 279	3 209	1 589	9 606	6 805	3 714	1 884
YEARS OF WORK EXPERIENCE BY TENURE ON CURRENT JOB								
Experience less than 5 years	2 924	3 165	501	463	1 678	1 956	745	746
Less than 2 years	1 556	1 777	244	235	875	1 076	438	466
2 years or more	1 368	1 388	258	228	803	880	307	280
Experience 5 to 9 years	7 137	7 126	1 069	766	4 469	4 720	1 598	1 642
Less than 2 years	2 379	1 854	329	148	1 519	1 207	531	500
2 to 4 years	2 568	2 818	383	271	1 545	1 841	641	707
5 years or more	2 189	2 455	357	348	1 406	1 672	426	435
Experience 10 to 19 years	13 403	9 486	1 615	1 054	8 006	6 108	3 783	2 325
Less than 2 years	2 546	1 464	364	158	1 501	932	680	373
2 to 4 years	2 990	2 334	379	191	1 722	1 513	890	630
5 to 9 years	3 486	2 684	335	341	2 026	1 668	1 125	655
10 years or more	4 382	3 004	536	363	2 757	1 974	1 068	668
Experience 20 or more years	16 749	6 455	3 712	1 289	9 189	3 983	3 848	1 183
Less than 2 years	1 485	675	358	184	833	396	293	95
2 to 4 years	2 019	935	372	194	1 115	616	532	125
5 to 9 years	2 409	1 214	558	244	1 237	783	614	187
10 years or more	10 836	3 631	2 424	667	6 003	2 189	2 409	776

Table 9. Percent Distribution of Workers, by Tenure on Current Job, Years of Work Experience, and Years of School Completed

(For meaning of symbols, see text)

Characteristic	All educational categories		Under 12 years		12 to 15 years		16 years and over	
	Male	Female	Male	Female	Male	Female	Male	Female
ALL WORKERS								
Total, 21 to 64 years old	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
TENURE ON CURRENT JOB								
Less than 2 years	22.0	25.6	21.6	25.0	22.7	25.3	20.7	27.0
2 to 4 years	22.7	29.1	20.1	24.6	22.9	29.7	24.2	30.4
5 to 9 years	19.4	22.5	17.4	23.7	19.3	22.8	21.3	20.4
10 years or more	35.8	22.8	40.9	26.7	35.1	22.1	33.8	22.2
YEARS OF WORK EXPERIENCE BY TENURE ON CURRENT JOB								
Experience less than 5 years	8.8	14.3	8.0	14.8	9.1	14.3	8.6	13.7
Less than 2 years	4.9	8.4	4.2	8.9	5.1	8.1	5.0	9.8
2 years or more	3.8	5.9	3.8	5.9	4.0	6.1	3.5	5.0
Experience 5 to 9 years	18.5	27.9	15.7	22.8	20.0	28.7	16.9	28.7
Less than 2 years	6.4	8.3	5.4	5.7	7.0	8.4	5.8	9.8
2 to 4 years	6.6	10.8	5.3	7.7	6.9	11.0	6.7	12.3
5 years or more	5.5	8.8	5.0	9.4	6.1	9.2	4.4	6.9
Experience 10 to 19 years	32.3	35.1	23.7	29.1	33.1	35.1	36.8	39.2
Less than 2 years	6.5	6.1	5.8	5.2	6.7	6.0	6.8	7.0
2 to 4 years	7.2	9.0	5.5	6.4	7.1	9.1	8.7	10.9
5 to 9 years	8.2	9.3	4.7	8.0	8.2	9.3	10.9	10.5
10 years or more	10.4	10.6	7.7	9.4	11.1	10.8	10.4	10.8
Experience 20 or more years	40.4	22.8	52.7	33.3	37.8	21.9	37.8	18.4
Less than 2 years	4.1	2.9	6.2	5.2	3.9	2.7	3.1	1.8
2 to 4 years	5.1	3.4	5.5	4.6	4.9	3.5	5.3	2.3
5 to 9 years	5.8	4.4	7.8	6.3	5.0	4.3	6.1	3.0
10 years or more	25.5	12.2	33.2	17.2	24.0	11.3	23.3	11.4
FULL-TIME WORKERS								
Total, 21 to 64 years old	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
TENURE ON CURRENT JOB								
Less than 2 years	19.8	22.0	18.8	20.3	20.3	21.5	19.5	24.3
2 to 4 years	22.2	28.5	20.2	24.7	22.2	28.9	23.6	29.5
5 to 9 years	20.1	24.2	18.1	26.1	20.0	24.7	21.7	21.7
10 years or more	37.8	25.3	42.9	28.8	37.5	24.8	35.1	24.5
YEARS OF WORK EXPERIENCE BY TENURE ON CURRENT JOB								
Experience less than 5 years	7.3	12.1	7.3	13.0	7.2	11.7	7.5	12.7
Less than 2 years	3.9	6.8	3.5	6.6	3.7	6.4	4.4	7.9
2 years or more	3.4	5.3	3.7	6.4	3.4	5.3	3.1	4.7
Experience 5 to 9 years	17.7	27.2	15.5	21.4	19.1	28.1	16.0	27.8
Less than 2 years	5.9	7.1	4.8	4.1	6.5	7.2	5.3	8.5
2 to 4 years	6.4	10.7	5.6	7.6	6.6	11.0	6.4	12.0
5 years or more	5.4	9.4	5.2	9.7	6.0	10.0	4.3	7.4
Experience 10 to 19 years	33.3	36.2	23.4	29.5	34.3	36.4	37.9	39.4
Less than 2 years	6.3	5.8	5.3	4.4	6.4	5.8	6.8	6.3
2 to 4 years	7.4	8.9	5.5	5.3	7.4	9.0	8.9	10.7
5 to 9 years	8.7	10.2	4.9	9.5	8.7	10.1	11.3	11.1
10 years or more	10.9	11.5	7.8	10.2	11.8	11.8	10.9	11.3
Experience 20 or more years	41.6	24.6	53.6	36.1	39.4	23.8	38.6	20.1
Less than 2 years	3.7	2.6	5.2	5.1	3.6	2.4	2.9	1.8
2 to 4 years	5.0	3.6	5.4	5.4	4.8	3.7	5.3	2.1
5 to 9 years	6.0	4.6	8.1	6.8	5.3	4.7	6.2	3.2
10 years or more	26.9	13.8	35.1	18.7	25.7	13.1	24.2	13.2

Table 10. Earnings Per Hour, by Tenure on Current Job, Years of Work Experience, and Years of School Completed

(For meaning of symbols, see text)

Characteristic	All educational categories				Under 12 years				12 to 15 years				16 years and over			
	Male		Female		Male		Female		Male		Female		Male		Female	
	Mean (dols.)	Std. error (dols.)	Mean (dols.)	Std. error (dols.)	Mean (dols.)	Std. error (dols.)	Mean (dols.)	Std. error (dols.)	Mean (dols.)	Std. error (dols.)	Mean (dols.)	Std. error (dols.)	Mean (dols.)	Std. error (dols.)	Mean (dols.)	Std. error (dols.)
ALL WORKERS																
Total, 21 to 64 years old	10.53	.13	7.13	.10	7.98	.20	5.41	.19	9.78	.14	6.71	.10	14.25	.36	9.72	.27
TENURE ON CURRENT JOB																
Less than 2 years	8.22	.24	5.73	.16	6.53	.39	4.42	.26	7.67	.26	5.33	.16	11.01	.66	7.80	.46
2 to 4 years	9.32	.24	6.73	.16	6.94	.38	4.84	.33	8.64	.26	6.30	.16	12.36	.59	9.16	.44
5 to 9 years	10.62	.29	7.70	.21	7.84	.41	5.87	.35	9.74	.28	7.29	.22	14.27	.76	10.69	.60
10 years or more	12.66	.24	8.66	.23	9.31	.31	6.45	.50	11.91	.26	8.23	.24	17.56	.65	11.92	.62
YEARS OF WORK EXPERIENCE BY TENURE ON CURRENT JOB																
Experience less than 5 years	6.83	.31	5.46	.20	5.21	.41	4.49	.29	6.36	.36	5.13	.20	9.15	.76	7.42	.64
Less than 2 years	6.64	.41	5.23	.25	5.14	.56	4.34	.40	6.04	.46	4.76	.26	9.06	1.07	7.16	.88
2 years or more	7.07	.45	5.85	.31	5.29	.60	4.72	.42	6.79	.57	5.58	.37	9.27	1.04	7.86	.83
Experience 5 to 9 years	8.15	.22	6.52	.17	6.54	.35	5.01	.26	7.65	.22	6.20	.18	10.71	.64	8.68	.45
Less than 2 years	7.48	.37	5.95	.31	6.10	.49	4.36	.63	7.05	.37	5.56	.34	9.78	1.16	7.73	.77
2 to 4 years	8.33	.39	6.67	.25	6.29	.56	4.89	.52	7.67	.41	6.04	.25	11.19	1.01	8.28	.68
5 years or more	8.70	.36	7.20	.30	7.27	.73	5.48	.41	8.31	.36	6.86	.34	11.20	1.16	8.77	.62
Experience 10 to 19 years	10.77	.22	7.78	.17	7.84	.35	5.86	.44	9.83	.22	7.25	.17	14.03	.54	10.32	.43
Less than 2 years	9.17	.47	6.17	.34	6.77	.63	4.59	.45	8.38	.49	5.67	.38	12.56	1.25	8.34	.92
2 to 4 years	10.22	.42	7.38	.30	8.20	.86	5.06	1.08	9.19	.36	6.99	.30	13.23	1.03	9.31	.68
5 to 9 years	11.07	.42	8.43	.36	8.29	.63	6.50	.80	10.13	.40	7.74	.37	13.70	.89	11.44	.89
10 years or more	11.94	.41	8.49	.31	8.10	.51	6.52	.83	11.19	.44	7.82	.30	15.99	1.03	11.54	.86
Experience 20 or more years	12.22	.23	7.80	.22	8.89	.29	5.69	.37	11.59	.26	7.55	.24	17.19	.63	11.44	.71
Less than 2 years	9.73	.67	5.65	.43	7.62	1.02	4.33	.62	9.66	.80	5.55	.44	13.02	2.13	(B)	(B)
2 to 4 years	11.02	.63	6.79	.53	7.45	.76	4.57	.48	10.70	.82	6.63	.46	14.47	1.37	(B)	(B)
5 to 9 years	11.82	.64	7.16	.40	7.92	.61	5.66	.53	10.83	.67	6.99	.43	17.54	1.65	10.18	1.52
10 years or more	12.95	.29	8.81	.33	9.59	.36	6.41	.62	12.25	.32	8.53	.37	16.26	.61	12.27	.88
FULL-TIME WORKERS																
Total, 21 to 64 years old	10.82	.14	7.52	.11	8.02	.20	5.71	.21	10.05	.15	7.04	.11	14.56	.36	9.99	.29
TENURE ON CURRENT JOB																
Less than 2 years	8.63	.27	6.19	.21	6.47	.40	4.81	.36	8.04	.29	5.71	.20	11.49	.72	8.09	.57
2 to 4 years	9.57	.25	7.00	.18	6.94	.39	4.90	.24	8.84	.27	6.55	.18	12.70	.61	9.37	.45
5 to 9 years	10.78	.30	7.96	.23	7.74	.42	6.19	.43	9.86	.29	7.44	.24	14.51	.77	11.02	.67
10 years or more	12.73	.24	8.84	.23	9.34	.31	6.70	.45	11.96	.26	8.37	.24	17.55	.64	11.72	.58
YEARS OF WORK EXPERIENCE BY TENURE ON CURRENT JOB																
Experience less than 5 years	7.19	.36	5.86	.26	5.11	.44	4.75	.39	6.79	.45	5.36	.26	9.50	.78	7.69	.70
Less than 2 years	7.07	.49	5.72	.38	5.08	.68	4.79	.62	6.46	.61	5.08	.28	9.40	1.03	7.69	1.14
2 years or more	7.33	.50	6.07	.41	5.13	.56	4.71	.46	7.15	.67	5.79	.53	9.65	1.16	8.22	.88
Experience 5 to 9 years	8.36	.22	6.95	.19	6.51	.35	5.40	.32	7.78	.21	6.47	.19	11.19	.67	9.07	.49
Less than 2 years	7.74	.40	6.36	.35	6.06	.48	(B)	(B)	7.25	.38	5.92	.36	10.20	1.27	7.94	.85
2 to 4 years	8.45	.37	6.81	.27	6.15	.50	5.20	.36	7.72	.33	6.20	.23	11.59	1.02	9.40	.72
5 years or more	8.69	.38	7.45	.35	7.31	.75	5.89	.51	8.41	.38	7.15	.40	11.61	1.18	9.83	1.02
Experience 10 to 19 years	10.95	.22	8.07	.18	7.91	.37	6.02	.43	10.06	.23	7.46	.18	14.13	.54	10.61	.48
Less than 2 years	9.50	.51	6.56	.44	6.81	.71	(B)	(B)	8.61	.52	5.96	.47	12.90	1.29	8.66	1.10
2 to 4 years	10.39	.43	7.69	.33	8.42	.90	(B)	(B)	9.31	.36	7.27	.33	13.33	1.05	9.72	.78
5 to 9 years	11.15	.43	8.71	.38	8.01	.82	6.65	.93	10.19	.40	7.64	.35	13.81	1.00	11.95	.95
10 years or more	12.01	.41	8.53	.29	8.22	.53	6.51	.70	11.22	.44	7.99	.30	15.66	1.00	11.24	.72
Experience 20 or more years	12.41	.24	8.15	.23	8.91	.29	5.99	.38	11.75	.26	7.90	.25	17.36	.64	11.37	.70
Less than 2 years	10.20	.74	6.12	.52	7.44	.99	(B)	(B)	10.16	.86	6.17	.56	13.72	2.26	(B)	(B)
2 to 4 years	11.27	.65	6.92	.49	7.49	.78	(B)	(B)	10.88	.63	6.96	.52	14.73	1.40	(B)	(B)
5 to 9 years	11.96	.66	7.42	.46	7.86	.64	5.70	.66	10.97	.68	7.21	.48	17.67	1.69	(B)	(B)
10 years or more	13.02	.29	9.10	.33	9.58	.36	6.61	.59	12.29	.32	8.72	.35	16.30	.61	12.13	.86

Table 11. Mean Hourly Earnings of Female Full-Time Workers and Female/Male Earnings Ratio in 1979 and 1986

(Occupations with at least 100,000 full-time workers in 1979 ranked by percent of female workers. Earnings in 1979 dollars)

Occupation	1979				1986				
							Hourly earnings of females		
	Number (thous.)	Percent female	Hourly earnings of females	Female/male earnings ratio	Number (thous.)	Percent female	Value	Standard error	Female/male earnings ratio
Secretaries	2,328	98.6	$ 5.14	58	2,716	99.2	$5.17	.05	(B)
Typists	343	97.0	4.64	80	495	95.7	5.01	.15	(B)
Receptionists	216	96.2	4.24	67	362	97.5	4.14	.11	(B)
Licensed practical nurses	221	95.8	4.87	83	238	98.9	5.06	.12	(B)
Registered nurses	669	94.6	6.98	82	1,028	92.7	7.76	.11	.91
Textile sewing machine operators	393	92.9	3.62	70	387	90.8	3.22	.10	(B)
Data-entry keyers	231	92.1	4.92	69	243	91.1	5.02	.16	(B)
Bank tellers	269	91.5	4.11	74	246	91.7	4.81	.69	(B)
Telephone operators	169	90.8	5.10	72	125	97.7	5.42	.25	(B)
Child care workers, exc. private hhld	116	88.9	2.67	59	249	97.7	1.99	.13	(B)
Bookkeepers, accounting, and auditing clerks	1,069	88.1	4.98	66	1,241	93.0	4.98	.10	.74
Nursing aides, orderlies, and attendants	616	85.1	3.98	72	747	88.3	3.91	.11	.81
Health aides, except nursing	133	83.5	4.26	74	219	79.3	4.37	.16	(B)
Waiters and waitresses	284	82.7	3.10	71	420	78.7	3.01	.12	.65
Payroll and timekeeping clerks	114	82.0	5.34	70	151	90.0	5.61	.21	(B)
General office clerks	881	80.2	4.90	69	458	79.9	5.11	.16	.79
Hairdressers and cosmetologists	218	79.8	4.12	65	336	83.6	3.79	.18	(B)
Cashiers	479	77.7	4.17	71	702	79.8	3.34	.12	.75
File clerks	122	73.6	4.50	64	137	80.5	5.03	.31	(B)
Health technologists and technicians	152	71.6	6.15	83	173	65.1	5.21	.32	(B)
Maids and housemen	251	70.9	3.43	71	290	82.2	3.23	.11	(B)
Sales workers, apparel	113	69.8	3.72	55	119	66.6	3.11	.25	(B)
Order clerks	202	64.3	5.50	77	140	81.2	6.06	.34	(B)
Hand packers and ackagers	282	63.9	4.63	78	163	52.9	4.03	.25	.73
Administrative support occupations, N.E.C	263	62.9	5.47	62	593	82.4	5.24	.13	.70
Teachers, elementary schools	559	60.9	6.27	82	935	81.9	6.97	.12	.95
Social workers	300	60.6	6.30	83	373	60.0	6.39	.23	.73
Sales workers, other commodities	536	58.8	3.89	56	526	59.4	3.85	.18	.69
Investigators and adjusters, except insurance	178	58.8	5.76	66	279	77.6	5.44	.19	(B)
Insurance adjusters, examiners, and investigators	128	57.3	5.40	63	179	67.2	5.50	.23	(B)
Computer operators	275	56.6	5.28	69	655	63.8	5.49	.19	.73
Miscellaneous food preparation occupations	114	55.5	3.46	95	203	40.5	3.60	.19	1.08
Cooks, except short order	376	53.9	3.32	75	687	45.5	2.98	.12	.77
Supervisors, general office	523	53.8	6.25	66	360	70.3	6.53	.22	.64
Supervisors, financial records processing	141	47.5	6.71	62	75	74.9	6.86	.34	(B)
Assemblers	891	47.2	4.77	71	749	42.1	4.74	.19	.75
Production inspectors, checkers, and examiners	480	46.7	4.96	62	508	53.3	4.98	.22	.62
Personnel, training and labor relations specialists	323	43.4	6.90	68	303	53.0	7.92	.65	.70
Editors and reporters	132	42.0	6.89	72	210	44.4	7.14	.52	.76
Supervisors, food preparation and service occupations	108	41.6	4.27	72	155	48.2	3.62	.32	.67
Buyers, wholesale and retail, exc. farm products	128	39.8	5.97	65	189	40.9	6.13	.35	.81
Teachers, secondary schools	248	39.7	6.33	83	951	49.1	6.99	.16	.86
Other financial officers	304	39.7	6.37	54	542	42.5	7.31	.42	.63
Production coordinators	190	39.6	5.57	67	166	49.6	5.37	.32	.66
Teachers, N.E.C	107	39.1	5.46	70	198	48.8	6.71	.51	.78
Bartenders	125	37.7	3.37	72	157	43.6	3.47	.26	.74
Designers	199	36.5	5.68	60	326	44.2	5.32	.45	.55
Managers, properties, and real estate	128	34.5	5.03	53	271	44.1	5.87	.43	.49

Table 11. Mean Hourly Earnings of Female Full-Time Workers and Female/Male Earnings Ratio in 1979 and 1986—Continued

(Occupations with at least 100,000 full-time workers in 1979 ranked by percent of female workers. Earnings in 1979 dollars)

Occupation	1979				1986				
							Hourly earnings of females		
	Number (thous.)	Percent female	Hourly earnings of females	Female/male earnings ratio	Number (thous.)	Percent female	Value	Standard error	Female/male earnings ratio
Stock and inventory clerks	358	34.2	$ 4.97	.75	462	33.5	$4.91	.21	.78
Accountants and auditors	771	34.0	6.45	.60	1,013	44.7	7.31	.22	.72
Real estate sales occupations	374	33.7	6.97	.64	421	42.5	6.86	.53	.66
Personnel and labor relations managers	182	33.5	7.35	.66	126	52.2	(B)	(B)	(B)
Administrators, education and related fields	243	31.6	7.33	.68	431	42.6	7.74	.43	.68
Purchasing agents and buyers, N.E.C.	161	30.2	6.27	.67	192	52.9	6.72	.37	.67
Administrators and officials, public administration	244	29.8	7.36	.67	393	43.4	7.67	.37	.76
Machine operators, not specified	854	29.5	4.66	.68	212	32.0	(B)	(B)	(B)
Financial managers	357	29.3	6.95	.57	401	38.3	7.26	.40	.58
Punching and stamping press machine operators	103	29.0	5.06	.71	107	27.9	(B)	(B)	(B)
Postal clerks except mail carriers	204	28.6	8.06	.91	202	33.4	(B)	(B)	(B)
Miscellaneous machine operators, N.E.C.	435	28.2	4.71	.65	679	29.7	4.78	.22	.69
Computer programmers	238	28.0	7.53	.80	382	39.7	8.49	.34	.81
Sales occupations, other business services	241	27.5	5.94	.58	336	34.1	7.05	.57	.79
Technicians, N.E.C.	221	23.7	6.40	.72	189	26.8	(B)	(B)	(B)
Slicing and cutting machine operators	120	23.3	4.17	.65	181	20.1	(B)	(B)	(B)
Stock handlers and baggers	180	23.0	4.20	.72	252	15.9	(B)	(B)	(B)
Insurance sales occupations	434	22.8	6.04	.53	394	27.4	6.72	.61	.62
Supervisors, and proprietors, sales occupations	1,200	22.4	4.68	.57	2,970	26.6	4.65	.18	.55
Managers and administrators, N.E.C.	4,112	22.1	6.23	.51	5,691	28.9	6.62	.14	.61
Traffic, shipping, and receiving clerks	324	21.8	4.75	.75	335	25.1	4.38	.32	.73
Postsecondary teachers, subject not specified	185	21.7	7.68	.72	107	36.0	(B)	(B)	(B)
Computer systems analysts and scientists	174	20.4	8.84	.79	393	29.7	8.95	.41	.83
Engineering technicians, N.E.C.	198	19.6	5.93	.66	183	25.8	(B)	(B)	(B)
Supervisors, distribution, scheduling, adjusting clerks	138	18.0	6.42	.74	176	27.6	(B)	(B)	(B)
Pharmacists	104	16.5	7.91	.80	117	26.3	(B)	(B)	(B)
Sales workers, hardware and building supplies	103	16.3	3.82	.58	123	16.6	(B)	(B)	(B)
Bus drivers	126	16.2	4.43	.63	174	28.9	(B)	(B)	(B)
Laborers, except construction	682	16.0	4.47	.72	786	15.0	4.52	.25	.91
Miscellaneous material moving equipment operators	128	15.6	4.74	.67	66	9.3	(B)	(B)	(B)
Janitors and cleaners	976	15.3	4.11	.74	1,049	21.0	3.44	.15	.69
Grinding, abrading, buffing, and polishing machine operators	169	15.2	4.98	.71	111	10.3	(B)	(B)	(B)
Inspectors and compliance officers, except construction	127	14.3	6.67	.74	166	18.0	(B)	(B)	(B)
Managers, marketing, advertising, and public relations	586	14.1	6.73	.55	402	29.3	8.61	.53	.60
Drafting occupations	233	13.3	6.02	.75	231	17.9	(B)	(B)	(B)
Painting and paint spraying machine operators	101	13.2	4.48	.67	149	8.6	(B)	(B)	(B)
Printing machine operators	210	13.0	4.66	.63	232	16.0	(B)	(B)	(B)

Table 11. Mean Hourly Earnings of Female Full-Time Workers and Female/Male Earnings Ratio in 1979 and 1986—Continued

(Occupations with at least 100,000 full-time workers in 1979 ranked by percent of female workers. Earnings in 1979 dollars)

Occupation	1979				1986				
							Hourly earnings of females		
	Number (thous.)	Percent female	Hourly earnings of females	Female/male earnings ratio	Number (thous.)	Percent female	Value	Standard error	Female/male earnings ratio
Supervisors production occupations	1,584	12.9	$ 5.77	.62	1,167	15.1	$6.02	.28	.67
Physicians	314	10.8	11.63	.57	420	17.4	(B)	(B)	(B)
Telephone installers and repairers	224	10.6	7.43	.78	217	13.5	(B)	(B)	(B)
Lawyers	385	10.4	9.40	.55	550	15.2	10.78	1.12	.63
Farm workers	304	10.3	2.73	.80	356	11.5	(B)	(B)	(B)
Guards and police, exc. public serice	292	10.1	4.86	.79	446	16.2	(B)	(B)	(B)
Sales representatives, mining, manufacturing and wholesale	957	10.1	6.22	.62	1,190	13.4	7.16	.56	.72
Electrical and electronic technicians	209	10.1	6.03	.71	240	12.3	(B)	(B)	(B)
Butchers and meat cutters	194	9.5	4.53	.63	193	9.2	(B)	(B)	(B)
Industrial engineers	168	8.8	6.86	.65	161	15.8	(B)	(B)	(B)
Mail carriers, postal service	211	8.3	7.31	.86	259	16.7	(B)	(B)	(B)
Farmers, except horticultural	846	7.1	2.40	.53	769	8.6	(B)	(B)	(B)
Garage and service-station related occupations	108	6.3	3.43	.76	112	5.5	(B)	(B)	(B)
Sales workers, parts	146	6.2	4.57	.72	101	7.0	(B)	(B)	(B)
Managers, farms, exc. horticultural	104	5.9	3.96	.62	129	10.2	(B)	(B)	(B)
Sales, workers, motor vehicles and boats	197	5.1	5.15	.70	211	8.3	(B)	(B)	(B)
Police and detectives, public services	359	4.9	6.59	.81	421	6.8	(B)	(B)	(B)
Welders and cutters	486	4.9	5.17	.70	433	3.0	(B)	(B)	(B)
Freight, stock, and material handlers, N.E.C.	235	4.6	5.34	.78	370	6.5	(B)	(B)	(B)
Industrial truck and tractor equipment operators	278	4.4	5.72	.84	320	4.4	(B)	(B)	(B)
Electrical and electronic engineers	279	4.4	8.39	.75	517	9.4	(B)	(B)	(B)
Groundkeepers and gardners, exc. farm	155	4.3	3.68	.71	355	2.8	(B)	(B)	(B)
Drivers - sales workers	132	4.0	4.46	.66	195	2.7	(B)	(B)	(B)
Specified mechanics and repairers, N.E.C.	213	4.0	5.27	.72	315	3.3	(B)	(B)	(B)
Electronic repairers, communications and industrial equipment	117	3.9	5.51	.78	148	3.5	(B)	(B)	(B)
Furnance, kiln, and oven operators, exc. food	113	3.9	6.13	.76	71	1.0	(B)	(B)	(B)
Machinists, exc. apprentices	390	3.8	5.12	.67	350	3.8	(B)	(B)	(B)
Clergy	217	3.8	3.92	.82	279	7.4	(B)	(B)	(B)
Truck drivers, light	302	3.8	4.79	.72	396	6.5	(B)	(B)	(B)
Painters, construction and maintenance	170	3.7	4.56	.68	234	2.7	(B)	(B)	(B)
Not specified mechanics and repairers	158	3.5	5.53	.73	149	1.1	(B)	(B)	(B)
Engineers, N.E.C.	210	3.2	8.50	.70	155	6.9	(B)	(B)	(B)
Industrial machinery repairers	373	2.6	5.47	.72	504	1.5	(B)	(B)	(B)
Stationary engineers	108	2.5	6.67	.73	94	0.0	(B)	(B)	(B)
Supervisors, mechanics and repairers	140	2.4	6.71	.75	282	9.3	(B)	(B)	(B)
Civil engineers	172	2.1	8.39	.71	229	1.9	(B)	(B)	(B)
Construction laborers	309	2.0	4.52	.74	325	2.5	(B)	(B)	(B)
Electricians, exc. apprentices	423	1.7	6.08	.69	481	0.6	(B)	(B)	(B)
Mechanical engineers	170	1.6	8.99	.76	234	3.9	(B)	(B)	(B)
Tool and die makers, exc. apprentices	150	1.5	6.13	.69	130	2.7	(B)	(B)	(B)
Truck drivers, heavy	1,173	1.5	5.14	.71	1,298	1.5	(B)	(B)	(B)
Construction trades supervisors, N.E.C.	494	1.4	7.05	.69	420	0.4	(B)	(B)	(B)

Table 11. Mean Hourly Earnings of Female Full-Time Workers and Female/Male Earnings Ratio in 1979 and 1986—Continued

(Occupations with at least 100,000 full-time workers in 1979 ranked by percent of female workers. Earnings in 1979 dollars)

Occupation	1979				1986				
							Hourly earnings of females		
	Number (thous.)	Percent female	Hourly earnings of females	Female/male earnings ratio	Number (thous.)	Percent female	Value	Standard error	Female/male earnings ratio
Carpenters, exc. apprentices	556	1.1	$ 4.88	.71	686	0.5	$ (B)	(B)	(B)
Operating engineers	128	1.0	5.89	.79	128	1.2	(B)	(B)	(B)
Plumbers, pipefitters and steamfitters exc. apprentices	312	1.0	6.02	.71	346	0.3	(B)	(B)	(B)
Automotive mechanics, exc. apprentices	660	0.9	5.30	.86	686	0.6	(B)	(B)	(B)
Automobile body and related repairers	137	0.9	5.13	.80	157	3.0	(B)	(B)	(B)
Heating, air conditioning and refrigeration mechanics	109	0.8	5.69	.77	192	0.3	(B)	(B)	(B)
Firefighing occupations	167	0.7	5.30	.80	157	1.3	(B)	(B)	(B)
Heavy equipment mechanics	116	0.7	7.01	.87	121	0.0	(B)	(B)	(B)
Bus, truck, and stationary engine mechanics	112	0.5	6.54	.89	243	1.0	(B)	(B)	(B)

Table 12. Characteristics of Persons With No Earnings

(Numbers in thousands. For meaning of symbols, see text)

Characteristic	Total	Received no earnings in month prior to interview					
		Total	Year last worked				
			Current year	Previous year	2 to 4 years ago	5 or more years ago	Never worked
MALES							
Total, 21 to 64 years old	64 318	12 661	4 599	2 564	2 633	2 412	652
AGE							
21 to 29 years	16 635	3 564	1 401	977	595	193	419
30 to 34 years	8 500	1 457	657	353	239	126	83
35 to 44 years	14 851	2 059	672	394	341	265	67
45 to 54 years	10 761	1 902	750	231	356	503	61
55 to 64 years	10 291	3 858	819	618	1 105	1 263	23
YEARS OF SCHOOL COMPLETED							
Less than 12 years	13 476	4 534	1 117	779	1 046	1 276	314
12 to 15 years	36 263	6 554	2 629	1 388	1 279	955	286
16 years and over	14 579	1 773	854	396	310	169	42
AGE BY YEARS OF SCHOOL COMPLETED							
21 to 29 years:							
Completed less than 12 years	3 105	907	263	205	206	55	145
Completed 12 to 15 years	12 519	2 218	957	618	318	64	241
Completed 16 years and over	3 213	439	181	154	66	25	32
30 to 44 years:							
Completed less than 12 years	3 798	1 033	311	236	227	165	94
Completed 12 to 15 years	13 458	1 887	824	367	296	229	51
Completed 16 years and over	7 187	596	384	114	54	30	5
45 to 64 years:							
Completed less than 12 years	8 568	2 594	542	338	611	1 028	75
Completed 12 to 15 years	10 298	2 449	748	361	663	653	4
Completed 16 years and over	4 179	717	279	131	187	115	4
MARITAL STATUS							
Married, spouse present	43 082	6 997	2 857	1 164	1 579	1 320	56
Widowed	615	298	52	61	80	96	9
Never married	14 144	3 849	1 112	883	818	558	571
Divorced, separated, or married spouse absent	6 477	1 716	578	326	359	438	15
AGE OF YOUNGEST CHILD							
Less than 2 years	7 681	871	486	156	144	61	24
3 to 5 years	4 851	547	338	79	67	70	5
6 to 12 years	9 256	874	545	168	141	111	6
13 years and over	5 497	864	374	119	184	187	–
None	36 033	9 604	2 887	2 042	2 077	1 984	616
RACE AND HISPANIC ORIGIN[1]							
White	55 767	10 294	4 039	2 029	2 365	1 796	389
Black	6 548	2 183	452	450	494	540	246
Hispanic origin	3 399	735	222	184	176	127	26
SELECTED STATUSES							
Covered by private health insurance	51 918	7 358	3 086	1 298	1 479	959	213
Not covered by private health insurance	12 400	5 305	1 530	1 265	1 154	1 448	439
Lives in food stamp household	3 815	2 180	399	440	631	544	166
Lives in public or subsidized housing	1 100	529	115	105	91	169	50
With a work disability	8 151	4 524	711	670	1 194	1 777	273
Prevented from working	3 168	3 168	51	310	639	1 636	283
FEMALES							
Total, 21 to 64 years old	67 673	29 375	5 599	3 815	5 438	11 139	3 420
AGE							
21 to 29 years	16 261	7 061	1 669	1 447	1 778	1 102	1 064
30 to 34 years	9 792	3 815	792	506	769	1 364	386
35 to 44 years	15 549	6 060	1 396	781	894	2 299	641
45 to 54 years	11 503	5 148	826	544	770	2 342	664
55 to 64 years	11 769	7 264	794	537	1 124	4 013	775
YEARS OF SCHOOL COMPLETED							
Less than 12 years	14 635	9 079	1 287	877	1 538	3 851	1 917
12 to 15 years	42 144	17 368	3 503	2 418	3 333	6 495	1 520
16 years and over	11 094	3 229	808	520	565	894	183
AGE BY YEARS OF SCHOOL COMPLETED							
21 to 29 years:							
Completed less than 12 years	2 809	1 850	261	240	456	474	484
Completed 12 to 15 years	13 145	4 503	1 127	1 014	1 164	662	515
Completed 16 years and over	3 207	708	300	189	158	18	43
30 to 44 years:							
Completed less than 12 years	4 186	2 332	344	240	439	735	574
Completed 12 to 15 years	15 883	6 026	1 382	793	1 056	2 414	381
Completed 16 years and over	5 271	1 548	430	229	272	533	82
45 to 64 years:							
Completed less than 12 years	7 540	4 887	492	367	647	2 513	868
Completed 12 to 15 years	13 115	6 539	894	611	1 112	3 388	424
Completed 16 years and over	2 616	873	235	103	136	444	98

Table 12. Characteristics of Persons With No Earnings—Con.

(Numbers in thousands. For meaning of symbols, see text)

Characteristic	Total	Received no earnings in month prior to interview					
		Total	Year last worked				
			Current year	Previous year	2 to 4 years ago	5 or more years ago	Never worked
MARITAL STATUS							
Married, spouse present	44 825	21 485	4 365	2 545	3 834	9 [illegible]	2 [illegible]
Widowed	3 014	1 630	207	138	241	796	247
Never married	12 382	3 595	641	548	653	473	679
Divorced, separated, or married spouse absent	9 855	5 166	653	462	707	967	387
AGE OF YOUNGEST CHILD							
Less than 3 years	9 722	4 953	825	644	1 530	1 209	747
3 to 5 years	6 278	3 138	569	397	527	1 260	379
6 to 12 years	10 527	4 513	667	596	695	1 704	527
13 years and over	8 369	2 691	656	258	369	1 [illegible]	257
None	35 399	14 286	2 528	1 721	2 315	5 841	1 880
RACE AND HISPANIC ORIGIN							
White	57 859	24 579	4 984	3 [illegible]	4 921	9 782	2 467
Black	8 236	3 406	523	527	984	1 148	534
Hispanic origin	3 754	1 667	291	209	303	529	616
SELECTED STATUSES							
Covered by private health insurance	54 967	20 660	4 364	3 528	5 667	8 263	1 [illegible]
Not covered by private health insurance	12 908	8 715	1 202	1 187	1 738	3 875	1 714
Lives in food stamp household	5 986	4 415	405	544	1 262	1 486	678
Lives in public or subsidized housing	2 544	1 462	126	163	331	552	290
With a work disability	9 220	6 783	704	638	1 213	3 279	910
Prevented from working	4 652	4 650	53	329	851	2 621	807

[1] Persons of Hispanic origin may be of any race.

Appendix A. Definitions and Explanations

Population coverage. This report includes the civilian noninstitutional population of the United States and members of the Armed Forces in the United States living off post or with their families on post. Other members of the Armed Forces are excluded.

Age. The age classification is based on the age of the person at his/her last birthday.

Race. Data are presented for two groups identified on the basis of race: White and Black.

Persons of Hispanic origin. Hispanic persons were identified by a question that asked for self-identification of the person's origin or descent. Respondents were asked to select their origin (and the origin of other household members) from a flashcard listing ethnic origins. Hispanics were those who indicated that their origin was Mexican, Puerto Rican, Cuban, Central or South American, or some other Hispanic origin. Hispanic persons may be of any race.

Years of school completed. Data on years of school completed were derived from the combination of answers to questions concerning the highest grade of school attended by the person and whether that grade was completed.

Worker status. Persons were classified as workers if they received wage or salary income during the month prior to the interview.

Work interruptions. Classifications of persons by frequency, reason for, and duration of work interruptions were based on responses to the set of questions reproduced in appendix C.

Potential work years. Potential work years were defined to equal current age minus years of school completed minus 6 years.

Earnings per hour. Information on earnings per hour was obtained directly for persons paid by the hour. For those not paid by the hour, earnings per hour was calculated by dividing total wages and salaries received during the month by an estimate of total hours worked during the month (number of weeks worked multiplied by usual number of hours worked per week).

Appendix B. Source and Reliability of Estimates

SOURCE OF DATA

Most of the data in this report were obtained from the Survey of Income and Program Participation (SIPP). Some of the estimates came from the Current Population Survey (CPS) and the 1980 census. The CPS data were obtained during the March 1987 CPS. The SIPP universe is the noninstitutional resident population of persons living in the United States.[1]

The 1984 panel SIPP sample is located in 174 areas comprising 450 counties (including one partial county) and independent cities. Within these areas, the bulk of the sample consisted of clusters of two to four living quarters (LQ's), systematically selected from lists of addresses prepared for the 1970 decennial census. The sample was updated to reflect new construction.

Approximately 26,000 living quarters were designated for the sample. For wave 1, interviews were obtained from the occupants of about 19,900 of the designated living quarters. Most of the remaining 6,100 living quarters were found to be vacant, demolished, converted to nonresidential use, or otherwise ineligible for the survey. However, approximately 1,000 of the 6,100 living quarters were not interviewed because the occupants refused to be interviewed, could not be found at home, were temporarily absent, or were otherwise unavailable. Thus, occupants of about 95 percent of all eligible living quarters participated in wave 1 of the survey.

For the subsequent waves, only original sample persons (those interviewed in the first wave) and persons living with them were eligible to be interviewed. With certain restrictions, original sample persons were to be followed if they moved to a new address. All noninterviewed households from wave 1 were automatically designated as noninterviews for all subsequent waves. When original sample persons moved without leaving forwarding addresses or moved to extremely remote parts of the country, additional noninterviews resulted.

Noninterviews. Tabulations in this report were drawn from interviews conducted from May through August 1984. Table B-1 summarizes information on nonresponse for the interview months in which the data used to produce this report were collected.

[1]The noninstitutionalized resident population includes persons living in group quarters, such as dormitories, rooming houses, and religious group dwellings. Crew members of merchant vessels, Armed Forces personnel living in military barracks, and institutionalized persons, such as correctional facility inmates and nursing home residents, were not eligible to be in the survey. Also, United States citizens residing abroad were not eligible to be in the survey. With these qualifications, persons who were at least 15 years of age at the time of interview were eligible to be interviewed.

Table B-1. Sample Size by Month and Interview Status

Month	Eligible	Interviewed	Noninterviewed	Nonresponse rate %*
May 1984	5400	4900	500	10
June 1984	5500	4800	700	13
July 1984	5400	4700	700	13
August 1984	5500	4700	700	14

*Due to rounding of all numbers at 100, there are some inconsistencies. The percentage was calculated using unrounded numbers.

Some respondents do not respond to some of the questions. Therefore, the overall nonresponse rate for some items is higher than the nonresponse rates in table B-1.

Estimation. The estimation procedure used to derive SIPP person weights involved several stages of weight adjustments. In the first wave, each person received a base weight equal to the inverse of his/her probability of selection. For each subsequent interview, each person received a base weight that accounted for following movers.

A noninterview adjustment factor was applied to the weight of every occupant of interviewed households to account for households which were eligible for the sample but were not interviewed. (Individual nonresponse within partially interviewed households was treated with imputation. No special adjustment was made for noninterviews in group quarters.) A factor was applied to each interviewed person's weight to account for the SIPP sample areas not having the same population distribution as the strata from which they were selected.

An additional stage of adjustment to person weights was performed to bring the sample estimates into agreement with independent monthly estimates of the civilian (and some military) noninstitutional population of the United States by age, race, and sex. These independent estimates were based on statistics from the 1980 Census of Population; statistics on births, deaths, immigration, and emigration; and statistics on the strength of the Armed Forces. To increase accuracy, weights were further adjusted in such a manner that SIPP sample estimates would closely agree with special Current Population Survey (CPS) estimates by type of householder (married, single with relatives or single without relatives by sex and race) and relationship to householder (spouse or other).[2] The estimation procedure for the data in the report

[2]These special CPS estimates are slightly different from the published monthly CPS estimates. The differences arise from forcing counts of husbands to agree with counts of wives.

also involved an adjustment so that the husband and wife of a household received the same weight.

RELIABILITY OF ESTIMATES

SIPP estimates in this report are based on a sample; they may differ somewhat from the figures that would have been obtained if a complete census had been taken using the same questionnaire, instructions, and enumerators. There are two types of errors possible in an estimate based on a sample survey: nonsampling and sampling. The magnitude of SIPP sampling error can be estimated, but this is not true of nonsampling error. Found below are descriptions of sources of SIPP nonsampling error, followed by a discussion of sampling error, its estimation, and its use in data analysis.

Nonsampling variability. Nonsampling errors can be attributed to many sources, e.g., inability to obtain information about all cases in the sample, definitional difficulties, differences in the interpretation of questions, inability or unwillingness on the part of the respondents to provide correct information, inability to recall information, errors made in collection such as in recording or coding the data, errors made in processing the data, errors made in estimating values for missing data, biases resulting from the differing recall periods caused by the rotation pattern and failure to represent all units within the universe (undercoverage). Quality control and edit procedures were used to reduce errors made by respondents, coders, and interviewers.

Undercoverage in SIPP results from missed living quarters and missed persons within sample households. It is known that undercoverage varies with age, race, and sex. Generally, undercoverage is larger for males than for females and larger for Blacks than for non-Blacks. Ratio estimation to independent age-race-sex population controls partially corrects for the bias due to survey undercoverage. However, biases exist in the estimates to the extent that persons in missed households or missed persons in interviewed households have different characteristics from those of interviewed persons in the same age-race-sex group. Further, the independent population controls used have not been adjusted for undercoverage in the decennial census.

The Bureau has used complex techniques to adjust the weights for nonresponse, but the success of these techniques in avoiding bias is unknown.

Comparability with other statistics. Caution should be exercised when comparing data from this report with data from earlier SIPP publications or with data from other surveys. The comparability problems are caused by sources such as the seasonal patterns for many characteristics, definitional differences, and different nonsampling errors.

Sampling variability. Standard errors indicate the magnitude of the sampling error. They also partially measure the effect of some nonsampling errors in response and enumeration, but do not measure any systematic biases in the data. The standard errors for the most part measure the variations that occurred by chance because a sample rather than the entire population was surveyed.

The sample estimate and its standard error enable one to construct confidence intervals, ranges that would include the average result of all possible samples with a known probability. For example, if all possible samples were selected, each of these being surveyed under essentially the same conditions and using the same sample design, and if an estimate and its standard error were calculated from each sample, then, approximately 90 percent of the intervals from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate would include the average result of all possible samples.

The average estimate derived from all possible samples is or is not contained in any particular computed interval. However, for a particular sample, one can say with a specified confidence that the average estimate derived from all possible samples is included in the confidence interval.

Standard errors may also be used for hypothesis testing, a procedure for distinguishing between population parameters using sample estimates. The most common types of hypotheses tested are 1) the population parameters are identical versus 2) they are different. Tests may be performed at various levels of significance, where a level of significance is the probability of concluding that the parameters are different when, in fact, they are identical.

All statements of comparison in the report have passed a hypothesis test at the 0.10 level of significance or better. This means that, for differences cited in the report, the estimated absolute difference between parameters is greater than 1.6 times the standard error of the difference.

Note when using small estimates. Summary measures (such as percent distributions) are shown in the report only when the base is 200,000 or greater. Because of the large standard errors involved, there is little chance that summary measures would reveal useful information when computed on a smaller base. Estimated numbers are shown, however, even though the relative standard errors of these numbers

Table B-2. Standard Errors of Estimated Numbers of Persons

(Numbers in thousands)

Size of estimate	Standard error	Size of estimate	Standard error
200	63	50,000	883
300	77	80,000	1,020
600	109	100,000	1,062
1,000	141	130,000	1,062
2,000	199	135,000	1,055
5,000	312	150,000	1,021
8,000	392	160,000	987
11,000	457	180,000	886
13,000	494	200,000	725
15,000	528	210,000	609
17,000	560	220,000	446
22,000	629		
26,000	678		
30,000	721		

Table B-3. Standard Errors of Estimated Percentages of Persons

Base of estimated percentage (thousands)	Estimated percentage					
	1 or 99	2 or 98	5 or 95	10 or 90	25 or 75	50
200	3.1	4.4	6.9	9.5	13.7	15.8
300	2.6	3.6	5.6	7.7	11.2	12.9
600	1.8	2.6	4.0	5.5	7.9	9.1
1,000	1.4	2.0	3.1	4.2	6.1	7.1
2,000	1.0	1.4	2.2	3.0	4.3	5.0
5,000	0.6	0.9	1.4	1.9	2.7	3.2
8,000	0.5	0.7	1.1	1.5	2.2	2.5
11,000	0.4	0.6	0.9	1.3	1.8	2.1
13,000	0.4	0.5	0.8	1.2	1.7	2.0
17,000	0.34	0.5	0.7	1.0	1.5	1.7
22,000	0.29	0.4	0.7	0.9	1.3	1.5
26,000	0.28	0.4	0.6	0.8	1.2	1.4
30,000	0.26	0.4	0.6	0.8	1.1	1.3
50,000	0.20	0.3	0.4	0.6	0.9	1.0
80,000	0.16	0.2	0.3	0.5	0.7	0.8
100,000	0.14	0.2	0.3	0.4	0.6	0.7
130,000	0.12	0.17	0.3	0.4	0.5	0.6
220,000	0.10	0.13	0.2	0.3	0.4	0.5

are larger than those for the corresponding percentages. These smaller estimates are provided primarily to permit such combinations of the categories as serve each user's needs. Also, care must be taken in the interpretation of small differences. For instance, in case of a borderline difference, even a small amount of nonsampling error can lead to a wrong decision about the hypotheses, thus distorting a seemingly valid hypothesis test.

Standard error parameters and tables and their use. To derive standard errors that would be applicable to a wide variety of statistics and could be prepared at a moderate cost, a number of approximations were required. Most of the SIPP statistics have greater variance than those obtained through a simple random sample of the same size because clusters of living quarters are sampled for SIPP. Two parameters (denoted "a" and "b") were developed to calculate variances for each type of characteristic.

The "a" and "b" parameters vary by subgroup. Tables B-4 and B-5 provide "a" and "b" parameters for characteristics of interest in this report. The "a" and "b" parameters may be used directly to calculate the standard error for estimated numbers and percentages. Because the actual variance behavior was not identical for all statistics within a group, the standard errors computed from parameters provide an indication of the order of magnitude of the standard error for any specific statistic.

For those users who wish further simplification, we have also provided general standard errors in tables B-2 and B-3. Note that these standard errors must be adjusted by a factor from table B-4 or B-5. The standard errors resulting from this simplified approach are less accurate. Methods for using these parameters and tables for computation of standard errors are given in the following sections.

Standard errors of estimated numbers. The approximate standard error, S_x, of an estimated number of persons, and so forth, shown in this report can be obtained in two ways. Note that neither method should be applied to dollar values.

It may be obtained by use of the formula

$$S_x = fs \qquad (1)$$

where f is the appropriate factor from table B-4, and s is the standard error on the estimate obtained by interpolation from table B-2. Alternatively, S_x may be approximated by the formula

$$S_x = \sqrt{ax^2 + bx} \qquad (2)$$

from which the standard errors in table B-2 were calculated. Use of this formula will provide more accurate results than the use of formula 1 above. Here x is the size of the estimate and "a" and "b" are the parameters associated with the particular type of characteristic being estimated.

Illustration. SIPP estimates given in text table E show that there were 15,831,000 males age 21-64 whose tenure in their current job was 10 years or more. The appropriate parameters and factor from table B-4 and the appropriate general standard error from table B-2 are

a = -0.0000677, b = 5,475, f = 0.52, s = 541,000

Using formula 1, the approximate standard error is

$$S_x = 0.52 \times 541{,}000 = 281{,}000$$

Using formula 2, the approximate standard error is

$$\sqrt{(-.0000677)\ (15{,}831{,}000)^2 + (5{,}475)\ (15{,}831{,}000)} = 264{,}000$$

The approximate 90-percent confidence interval as shown by the data is from 15,409,000 to 16,253,000. Therefore, a conclusion that the average estimate derived from all possi-

ble samples lies within a range computed in this way would be correct for roughly 90 percent of all samples.

Standard error of a mean. A mean is defined here to be the average quantity of some item per person and so forth. Standard errors are provided in the detailed tables for all displayed means.

Standard errors of estimated percentages. The reliability of an estimated percentage, computed using sample data for both numerator and denominator, depends upon both the size of the percentage and the size of the total upon which the percentage is based. When the numerator and denominator of the percentage have different parameters, use the parameter (and appropriate factor) of the numerator.

The type of percentages presented in this report is the percentage of persons sharing a particular characteristic such as the percent of persons with a work interruption.

For percentage of persons, the approximate standard error, $S_{(x,p)}$, of the estimated percentage p which be obtained by the formula

$$S_{(x,p)} = fs \qquad (3)$$

In this formula, f is the appropriate factor from table B-4 and s is the standard error on the estimate from table B-3. Alternatively, it may be approximated by the formula

$$S_{(x,p)} = \sqrt{(b/x)\,(p)\,(100-p)} \qquad (4)$$

from which the standard errors in table B-3 were calculated. Use of this formula will give more accurate results than use of formula 3 above. Here x is the size of the subclass of social units which is the base of the percentage, p is the percentage ($0 < p < 100$), and b is the parameter associated with the characteristic in the numerator.

Illustration. Text table E shows that 35.8 percent of 44,195,000 males age 24-64 have held their current job for 10 years or more. Using formula 3 with the factor from table B-4 and the appropriate standard error from table B-3, the approximate standard error is

$$S_{(x,p)} = 0.52 \times 1.0\% = 0.5\%$$

Using formula 4 with the "b" parameter from table B-4, the approximate standard error is

$$S_{(x,p)} = \sqrt{\frac{5,475}{44,195,000}\,35.8\%\,(100\%-35.8\%)} = 0.5\%$$

Consequently, the approximate 90-percent confidence interval as shown by these data is from 34.9 to 36.7 percent.

Standard error of a difference within this report. The standard error of a difference between two sample estimates is approximately equal to

$$S_{(x-y)} = \sqrt{S_x^2 + S_y^2} \qquad (5)$$

Table B-4. SIPP Generalized Variance Parameters

Characteristic	a	b	factor
TOTAL OR WHITE PERSONS			
16+ program participation and benefits, poverty (3):			
Both sexes	-0.0000943	16,059	0.90
Male	-0.0001984	16,059	0.90
Female	-0.0001796	16,059	0.90
16+ income and labor force (5):			
Both sexes	-0.0000321	5,475	0.52
Male	-0.0000677	5,475	0.52
Female	-0.0000612	5,475	0.52
Educational attainment (4)	-0.0000471	6,073	0.55
All Others' (6)			
Both sexes	-0.0000864	19,911	1.00
Male	-0.0001786	19,911	1.00
Female	-0.0001672	19,911	1.00
BLACK			
Poverty (1):			
Both sexes	-0.0004930	13,698	0.83
Male	-0.0010522	13,698	0.83
Female	-0.0009274	13,698	0.83
All others (2):			
Both sexes	-0.0002670	7,366	0.61
Male	-0.0005737	7,366	0.61
Female	-0.0004933	7,366	0.61

'For example, use these parameters for asset and debt tabulations, retirement and pension tabulations, 0+ program participation, 0+ benefits, 0+income, and 0+ labor force.

Note: for cross-tabulations, use the parameters of the characteristic with the smaller number within the parentheses.

where S_x and S_y are the standard errors of the estimates x and y.

The estimates can be numbers, percents, ratios, etc. The above formula assumes that the sample correlation coefficient, r, between the two estimates is zero. If r is really positive (negative), then this assumption will lead to overestimates (underestimates) of the true standard error.

Illustration. Again using text table 1, 35.8 percent of males age 21-64 and 22.8 percent of females age 21-64 held their current jobs 10 or more years. The standard errors for these percentages are computed using formula 4, both to be 0.5%. Assuming that these two estimates are not correlated, the

Table B-5. CPS Generalized Variance Parameters

Characteristic	a	b	factor
TOTAL PERSONS			
Labor force:			
Both sexes	-0.000034	2,327	0.34
Male	-0.000061	2,013	0.32
Female	-0.000050	1,725	0.29

standard error of the estimated difference of 13.0 percentage points is

$$S_{(x-y)} = \sqrt{(0.5\%)^2 + (0.5\%)^2} = 0.7\%$$

The approximate 90-percent confidence interval is from 12.2 to 13.8 percentage points. Since this interval does not contain zero, we conclude that the difference is significant at the 10 percent level.

Standard errors of ratios of means. The standard error for a ratio of means is approximated by:

$$S_{x/y} = \sqrt{\left(\frac{x}{y}\right)^2 \left[\left(\frac{S_y}{y}\right)^2 + \left(\frac{S_x}{x}\right)^2\right]} \quad (6)$$

where x and y are the means , and S_x and S_y are their associated standard errors. Formula 6 assumes that the means are not correlated. If the correlation between the two means is actually positive (negative), then this procedure will provide an overestimate (underestimate) of the standard error for the ratio of means. The standard errors in table B-6 can be used with formula 6 to obtain standard errors for ratios of female to male earnings.

Table B-6. Standard Errors of Estimates of 1986 Hourly Earnings of Full-Time Workers: Occupations With at Least 75,000 Full-Time Workers of Each Sex

Occupation	Hourly earnings of females		Hourly earnings of males		Ratio of female-male earnings
	Value	Standard error	Value	Standard error	
Registered nurses	$ 7.76	.11	$ 8.52	.47	.91
Bookkeeper, accounting and auditing clerks	4.98	.10	6.72	.58	.74
Nursing aides, orderlies, and attendants	3.91	.11	4.80	.44	.81
Waiters and waitresses	3.01	.12	4.62	.33	.65
General office clerks	5.11	.16	6.46	.51	.79
Cashiers	3.34	.12	4.47	.33	.75
Hand packers and packagers	4.03	.25	5.55	.41	.73
Administrative support occupations, N.E.C.	5.24	.13	7.50	.48	.70
Teachers, elementary schools	6.97	.12	7.34	.30	.95
Social workers	6.39	.23	8.73	.49	.73
Sales workers, other commodities	3.85	.18	5.55	.36	.69
Computer operators	5.49	.19	7.48	.27	.73
Miscellaneous food preparation occupations	3.60	.19	3.32	.22	1.08
Cooks, except short order	2.98	.12	3.90	.14	.77
Supervisor, general office	6.53	.22	10.18	.56	.64
Assemblers	4.74	.19	6.36	.20	.75
Production inspectors, checkers, and examiners	4.98	.22	8.05	.26	.62
Personnel, training, and labor relations specialist	7.92	.65	11.37	.85	.70
Editors and reporters	7.14	.52	9.44	.60	.76
Supervisor, food preparation and service occupations	3.62	.32	5.41	.47	.67
Buyers, wholesale and retail, except farm products	6.13	.95	7.58	.55	.81
Teachers, secondary school	6.99	.16	8.17	.19	.86
Other financial officers	7.31	.42	11.70	.56	.63
Production coordination	5.37	.32	8.18	.52	.66
Teachers, N.E.C.	6.71	.51	8.56	.77	.78
Bartenders	3.47	.26	4.72	.27	.74
Designers	5.32	.45	9.70	.61	.55
Managers, properties, and real estate	5.87	.43	11.90	1.30	.49
Stock and inventory clerks	4.91	.21	6.28	.22	.78
Accountants and auditors	7.31	.22	10.11	.28	.72
Real estate sales occupations	6.86	.53	10.46	.88	.66
Administrators, education and related fields	7.74	.43	11.31	.46	.68
Purchasing agents and buyers, N.E.C.	6.72	.37	9.98	.60	.67
Administrators and officials, public administration	7.67	.37	10.02	.40	.76
Financial managers	7.26	.40	12.46	.58	.58
Miscellaneous machine operators, N.E.C.	4.78	.22	6.95	.19	.69
Computer programmers	8.49	.34	10.44	.48	.81
Sales occupations, other business services	7.05	.57	8.95	.44	.79
Insurance sales occupations	6.72	.61	10.77	.74	.62
Supervisors and proprietors, sales occupations	4.65	.18	8.42	.20	.55
Managers and administrators, N.E.C.	6.62	.14	10.86	.18	.61
Traffic, shipping, and receiving clerks	4.38	.32	6.00	.21	.73
Computer systems analyst and scientists	8.95	.41	10.84	.37	.83
Laborers, except construction	4.52	.25	5.56	.15	.81
Janitor and cleaners	3.44	.15	4.96	.11	.69
Managers, marketing, advertising, and public relations	8.61	.53	14.25	.88	.60
Supervisor, production occupations	6.02	.28	8.98	.18	.67
Lawyers	10.78	1.12	17.03	.87	.63
Sales representatives, mining manufacturing and wholesale	7.16	.56	9.98	.26	.72

Appendix C. Facsimile of 1984 SIPP Third Wave Questions

Section 5 — TOPICAL MODULES

Part A — EDUCATION AND WORK HISTORY

CHECK ITEM T1 — *Refer to Control Card item 24*
Is . . . 16 years of age or over?
8000
1 ☐ Yes
2 ☐ No — *SKIP to item 1, page 53*

1a. **These next questions are about education, health and work experiennce.**

CHECK ITEM T2 — *Refer to Control Card item 31a*
Was . . . 's highest grade attended at least four years of high school?
(Codes 12 – 26 in cc item 31a.)
8002
1 ☐ Yes
2 ☐ No — *SKIP to 1c*

1b. **In high school what kind of program did . . . follow — was it** *(Read categories)* —
Mark (X) only one.
8004
1 ☐ **Academic or college preparatory?**
2 ☐ **Vocational?**
3 ☐ **Business or commerical?**
4 ☐ **General?**
5 ☐ Some other type — *Specify*
x1 ☐ DK

c. **Did . . . complete courses in any of the following subjects in high school?**

		Yes	No	DK
(1) **Algebra**	8008	1 ☐	2 ☐	x1 ☐
(2) **Trigonometry or geometry**	8009	1 ☐	2 ☐	x1 ☐
(3) **Chemistry or physics**	8010	1 ☐	2 ☐	x1 ☐
(4) **3 or more years of English composition or literature**	8013	1 ☐	2 ☐	x1 ☐
(5) **2 or more years of a foreign language**	8014	1 ☐	2 ☐	x1 ☐
(6) **2 or more years of industrial arts, shop, or home economics**	8015	1 ☐	2 ☐	x1 ☐
(7) **2 or more years of business courses, such as bookkeeping, shorthand, or secretarial typing**	8016	1 ☐	2 ☐	x1 ☐

d. **Was the high school that . . . attended a public school or a private school?**
8020
1 ☐ Public
2 ☐ Private
x1 ☐ DK

CHECK ITEM T3 — *Refer to Control Card item 31a*
Was . . . 's highest grade attended at least one year of college?
(Codes 21 – 26 in cc item 31a.)
8022
1 ☐ Yes — *SKIP to 2a*
2 ☐ No

1e. **Has . . . received a high school diploma?**
Include the program known as GED.
8024
1 ☐ Yes
2 ☐ No
x1 ☐ DK
} *SKIP to Check Item T5*

TOPICAL MODULES

2a. **In what year did . . . first attend college or university?** 8026 — 1 9 ☐☐ / x1 ☐ DK

b. **What is the highest degree beyond a high school diploma that . . . has earned?** 8028
1 ☐ PhD or equivalent
2 ☐ Professional degree such as Dentistry, Medicine, Law or Theology
3 ☐ Master's Degree
4 ☐ Bachelor's Degree
5 ☐ Associate Degree
6 ☐ Vocational Certificate or diploma
7 ☐ Has not earned a degree — *SKIP to 2f*
x1 ☐ DK

c. **In what calendar year did . . . receive his/her highest degree?** 8030 — 1 9 ☐☐ / x1 ☐ DK

d. *(SHOW FLASHCARD V)*
In what field of study did . . . receive that degree? 8032 — Code ☐☐ Field of study ____ / x1 ☐ DK

CHECK ITEM T4 Did . . . receive a degree higher than a Bachelor's degree? *(Box 1, 2, or 3 marked in item 2b.)* 8034
1 ☐ Yes
2 ☐ No — *SKIP to Check Item T5*

2e. **In what calendar year did . . . receive his/her Bachelor's degree?** 8036 — 1 9 ☐☐ / x1 ☐ DK — *SKIP to Check Item T5*

(SHOW FLASHCARD V)
2f. **In what field of study were the courses that . . . took at college or university?** 8038 — Code ☐☐ Field of study ____

g. **When was the last calendar year in which . . . was a student at a college or university?** 8040 — 1 9 ☐☐
OR
1 ☐ Is still a student
x1 ☐ DK

CHECK ITEM T5 *Refer to Control Card item 24.* Is . . . 65 years of age or over? 8042
1 ☐ Yes — *SKIP to Check Item T9*
2 ☐ No

3a. **Has . . . ever received training designed to help people find a job, improve job skills or learn a new job?** 8044
1 ☐ Yes
2 ☐ No
x1 ☐ DK — *SKIP to Check Item T9*

b. **Does . . . use this training on . . .'s (most recent) job?** 8046
1 ☐ Yes
2 ☐ No

c. **Where did . . . receive this training?**
Mark (X) all that apply.
8048 1 ☐ Apprenticeship program
8050 2 ☐ Business, commercial, or vocational school
8052 3 ☐ Junior or community college
8054 4 ☐ Program completed at a 4 year college or graduate school
8056 5 ☐ High school vocational program
8058 6 ☐ Training program at work
8060 7 ☐ Military (exclude basic training)
8062 8 ☐ Correspondence course
8064 9 ☐ Training or experience received on previous job
8066 10 ☐ Sheltered workshop
8068 11 ☐ Vocational rehabilitation centers
8070 12 ☐ Other

CHECK ITEM T6 Are 2 or more categories marked in item 3c above? 8072
1 ☐ Yes
2 ☐ No — *SKIP to 3e*

3d. **Where did . . . receive . . .'s latest training?** 8074 ☐☐ *Enter code from 3c*

e. **When did . . . receive . . .'s (most recent) training?** 8076
1 ☐ Now attending
2 ☐ 1984
3 ☐ 1983
4 ☐ 1982
5 ☐ 1981
6 ☐ 1980
7 ☐ 1979 or before
x1 ☐ DK
} *SKIP to Check Item T9*

f. **For how many weeks did . . . attend this (most recent) program?** 8078 ☐☐ Weeks
OR
8080
1 ☐ Less than one week
x1 ☐ DK

g. **Who paid for this (most recent) program?** 8082
1 ☐ Self or family
2 ☐ Employer
3 ☐ Federal, State, or local government
4 ☐ Someone else

CHECK ITEM T7 Is "1982," "1983," "1984," or "Now attending" marked in item 3e above? 8084
1 ☐ Yes
2 ☐ No — *SKIP to Check Item T9*

TOPICAL MODULES

NOTES

3h. **Since January 1, 1982, has . . . received training that was sponsored by any of the following programs —**

(1) The Job Training Partnership Act or the Comprehensive Employment Training Act (JTPA or CETA)? 8086
1 ☐ Yes
2 ☐ No
x1 ☐ DK

(2) The Work Incentive Program (WIN)? 8088
1 ☐ Yes
2 ☐ No
x1 ☐ DK

(3) The Job Corps Program? 8090
1 ☐ Yes
2 ☐ No
x1 ☐ DK

(4) The Trade Adjustment Assistance Act? 8092
1 ☐ Yes
2 ☐ No
x1 ☐ DK

CHECK ITEM T8 Is "Yes" marked for one or more of the programs in item 3h? 8094
1 ☐ Yes — *Ask 3i – 3k for each program marked*
2 ☐ No — *SKIP to Check Item T9*

		PROGRAM 1	PROGRAM 2
		Code Name of program	Code Name of program
Enter code from 3h and name of training program. →	8096 / 8116		
3i. In what year did . . . start his/her *(Read name of program)* **training?** *If more than one training episode, ask about most recent one first.*	8098 / 8118	1 ☐ 1984 2 ☐ 1983 3 ☐ 1982	1 ☐ 1984 2 ☐ 1983 3 ☐ 1982
j. For how many weeks did . . . attend this training program?	8100 / 8120	☐☐ Weeks	☐☐ Weeks
		OR	OR
	8102 / 8122	1 ☐ Less than 1 week x1 ☐ DK	1 ☐ Less than 1 week x1 ☐ DK
k. What type of training program is (was) this? *Mark (X) all that apply.*	8104 / 8124	1 ☐ Classroom training-job skills	1 ☐ Classroom training-job skills
	8106 / 8126	2 ☐ Classroom training-basic education	2 ☐ Classroom training-basic education
	8108 / 8128	3 ☐ On-the-job training	3 ☐ On-the-job training
	8110 / 8130	4 ☐ Job search assistance	4 ☐ Job search assistance
	8112 / 8132	5 ☐ Work experience	5 ☐ Work experience
	8114 / 8134	6 ☐ Other	6 ☐ Other
CHECK ITEM T9 Is "Worked" marked on the ISS?	8136	1 ☐ Yes 2 ☐ No — *SKIP to 4b*	
4a. These next questions are about the main job that . . . was working during the 4-month period.			
CHECK ITEM T10 *Refer to Check Item E3, page 14 or Check Item S1, page 18.* On . . .'s main job, did . . . work for an employer or is . . . self-employed?	8138	1 ☐ Worked for an employer — *SKIP to 5a* 2 ☐ Self-employed — *SKIP to 5f*	
4b. In what year did . . . last work at a paid job lasting 2 consecutive weeks or more?	8140	1 9 ☐☐ *SKIP to 4d* OR x1 ☐ Never worked for 2 consecutive weeks or more	
c. What is the main reason . . . never worked 2 consecutive weeks or longer at a job or business?	8142	1 ☐ Taking care of home or family 2 ☐ Ill or disabled 3 ☐ Going to school 4 ☐ Couldn't find work 5 ☐ Didn't want to work 7 ☐ Other x1 ☐ DK *SKIP to item 1, page 53*	
d. At the time . . . last worked 2 consecutive weeks or longer, what was the name of . . .'s employer or business? –	PGM 8 / 8150	Name of employer or business	

4e. What kind of company, business, or industry was *(Name of employer or business)*?

PGM 6 — 8152

f. Was that business mainly *(Read categories)* –

8154

1 ☐ Manufacturing?
2 ☐ Wholesale trade?
3 ☐ Retail trade?
4 ☐ Some other kind of business?

g. What kind of work was . . . doing on that job?

8156

h. What were . . .'s main activities or duties?

8158

i. Did . . . work for an employer on that job or was . . . self-employed?

8160

1 ☐ Worked for an employer
2 ☐ Self-employed

CHECK ITEM T11 Is "1983" or "1984" marked in item 4b, page 48?

PGM 7 — 8162

1 ☐ Yes
2 ☐ No – *SKIP to 6m*

CHECK ITEM T12 Is "Self-employed" marked in item 4i above?

8164

1 ☐ Yes – *SKIP to 5f*
2 ☐ No

5a. About how many persons are (were) employed by . . .'s employer at the location where . . . works (worked)?

8166

1 ☐ Under 25
2 ☐ 25 to 99
3 ☐ 100 to 499
4 ☐ 500 to 999
5 ☐ 1,000 or more
x ☐ DK — *SKIP to 5d*

b. Does (Did) . . .'s employer operate in more than one location?

8168

1 ☐ Yes
2 ☐ No — *SKIP to 5d*
x ☐ DK — *SKIP to 5d*

c. About how many persons are (were) employed by . . .'s employer at ALL LOCATIONS?

8170

1 ☐ Under 25
2 ☐ 25 to 99
3 ☐ 100 to 499
4 ☐ 500 to 999
5 ☐ 1,000 or more
x ☐ DK

d. Is (Was) . . . a member of a labor union at the time . . . worked at that job?

8172

1 ☐ Yes
2 ☐ No
x ☐ DK

e. Is (Was) . . . covered by a union contract at that job?

8174

1 ☐ Yes
2 ☐ No
x ☐ DK

f. For how many years has . . . worked (did . . . work) at that job or business?

8176 — ☐☐ Years

OR

8178 — ☐☐ Months

8180 — x ☐ DK

g. **What was . . .'s approximate rate of pay before deductions at the time . . . started working at this job?**

Mark (X) only one.

8182 $. Per hour

OR

8184 $. 00 Per week

OR

8186 $. 00 Per month

OR

8188 $. 00 Per year

8190 x1 ☐ DK

ASK OR VERIFY —

5h. **How many hours per week does (did) . . . usually work at this job?**

8192 Hours

x1 ☐ DK

i. **For how many years has (had) . . . done the kind of work that . . . does (did) on this job?**

8194 Years

OR

8196 Months

8198 x1 ☐ DK

CHECK ITEM T13 Is "Worked" marked on the ISS?

8200 1 ☐ Yes — *SKIP to Check Item T14*
2 ☐ No

5j. **What was the main reason . . . stopped working for** *(Name of employer or business)*?

Mark (X) only one.

8202
1 ☐ Layoff, plant closed
2 ☐ Discharged
3 ☐ Found a better job
4 ☐ Retirement
5 ☐ Did not like working conditions
6 ☐ Dissatisfied with earnings
7 ☐ Family or personal reasons
8 ☐ Did not like location
9 ☐ Other — *Specify*

CHECK ITEM T14 Is . . . 21 years of age or over?

8204 1 ☐ Yes
2 ☐ No — *SKIP to item 1, page 53*

CHECK ITEM T15 Is 10 or more years marked in 5f?

8206 1 ☐ Yes — *SKIP to 7a*
2 ☐ No

ASK OR VERIFY —

Exclude part-time jobs held at the same time as job entered in 5a through 5i.

6a. **Did . . . hold a job before the one we have just talked about?**

8208 1 ☐ Yes
2 ☐ No — *SKIP to 7a*

b. **What was the name of the employer or business . . . worked for at that earlier job?**

PGM 6 Name of employer or business

8250

c. **What kind of company, business, or industry was** *(Name of employer or business)*?

8252

d. **Was that business mainly** *(Read categories)* —

8254

1 ☐ **Manufacturing?**
2 ☐ **Wholesale trade?**
3 ☐ **Retail trade?**
4 ☐ **Some other kind of business?**

e. **What kind of work was . . . doing on that job?**

8256

f. **What were . . .'s main activities or duties?**

8258

g. **Did . . . work for an employer on that job or was . . . self-employed?**

8260

1 ☐ Worked for an employer
2 ☐ Self employed

h. **In what year did . . . START working for** *(Name of employer or business)*?

PGM 1

8262

1 9 ☐ ☐

x1 ☐ DK

i. **In what year did . . . STOP working for** *(Name of employer or business)*?

8264

1 9 ☐ ☐

x1 ☐ DK

6j. **How many hours per week did . . . usually work at this job?**

8266

☐☐ Hours

x1 ☐ DK

k. **What was . . .'s approximate rate of pay before deductions at the time . . . stopped working on that job?**

Mark (X) only one.

8268

$ ☐ . ☐ Per hour

OR

8270

$ ☐ . 00 Per week

OR

8272

$ ☐ . 00 Per month

OR

8274

$ ☐ . 00 Per year

8276

x1 ☐ DK

l. **How much time was there between the time . . . stopped working for** *(Name of employer or business)* **and the time . . . started working at . . .'s current (most recent) main job?**

Mark (X) only one.

8278

☐☐ Weeks

OR

8280

☐☐ Months

OR

8282

☐☐ Years

8284

x3 ☐ None

x1 ☐ DK

m. **What was the main reason . . . stopped working for** *(Name of employer or business)*?

Mark (X) only one.

6286

1 ☐ Layoff, plant closed
2 ☐ Discharged
3 ☐ Found a better job
4 ☐ Retirement
5 ☐ Did not like working conditions
6 ☐ Dissatisfied with earnings
7 ☐ Family or personal reasons
8 ☐ Did not like location
9 ☐ Other — *Specify* _____

7a. **In what year did . . . first work six straight months or longer at a job or business?**

6288 1 9 ☐☐

X3 ☐ Never worked 6 straight months at a job or business } *SKIP to Check Item T16*
X1 ☐ DK

b. **Since** *(Year entered in 7a)* **how many years have there been when . . . worked at least 6 months during the year?**

6290

X5 ☐ All years

OR

☐☐ Years

X1 ☐ DK

c. **During the time that . . . has worked, has . . . generally worked full-time or part-time?**

6292

1 ☐ Full-time
2 ☐ Part-time

CHECK ITEM T16 *Refer to Control Card item 24.*

Is . . . 65 years of age or older?

6294

1 ☐ Yes — *SKIP to item 1, page 53*
2 ☐ No

8a. **People spend time out of the labor force for various reasons, such as taking care of a home or family, illness, going to school or other reasons. Since . . . was 21 years of age, have there been any periods lasting 6 months or longer when . . . did not work at a paid job or business?**

6296

1 ☐ Yes
2 ☐ No — *SKIP to item 1, page 53*

b. **From the time . . . was 21 years old, when was the first time that . . . went 6 months or longer without working at a job or business?**

	FROM		TO	
6298	1 9 ☐☐	6300	1 9 ☐☐	
6302	X1 ☐ DK			

8c. **What was the reason . . . did not work at a job or business during that time?**

Mark (X) only one.

8304
1 ☐ Took care of family or home
2 ☐ Own illness or disability
3 ☐ Could not find work
4 ☐ Going to school
5 ☐ Other

d. **After this first time were there any other periods of 6 months or longer when . . . did not work at a job or business?**

8306
1 ☐ Yes
2 ☐ No — *SKIP to 1, page 53*

e. **How many other times did this happen?**

8308
1 ☐ One time
2 ☐ Two times
3 ☐ Three or more times

Ask 8f and 8g for each "Other" time. Maximum of three.

f. **When was the (second/third/fourth) time that . . . went 6 months or longer without working at a job or business?**

8g. **What was the main reason . . . did not work at a job or business during that time?**

SECOND TIME

FROM
8310 1 9 ☐ ☐
TO
8312 1 9 ☐ ☐
OR
8314 X1 ☐ DK

8316
1 ☐ Took care of family or home
2 ☐ Own illness or disability
3 ☐ Could not find work
4 ☐ Going to school
5 ☐ Other

THIRD TIME

FROM
8318 1 9 ☐ ☐
TO
8320 1 9 ☐ ☐
OR
8322 X1 ☐ DK

8324
1 ☐ Took care of family or home
2 ☐ Own illness or disability
3 ☐ Could not find work
4 ☐ Going to school
5 ☐ Other

FOURTH TIME

FROM
8326 1 9 ☐ ☐
TO
8328 1 9 ☐ ☐
OR
8330 X1 ☐ DK

8332
1 ☐ Took care of family or home
2 ☐ Own illness or disability
3 ☐ Could not find work
4 ☐ Going to school
5 ☐ Other

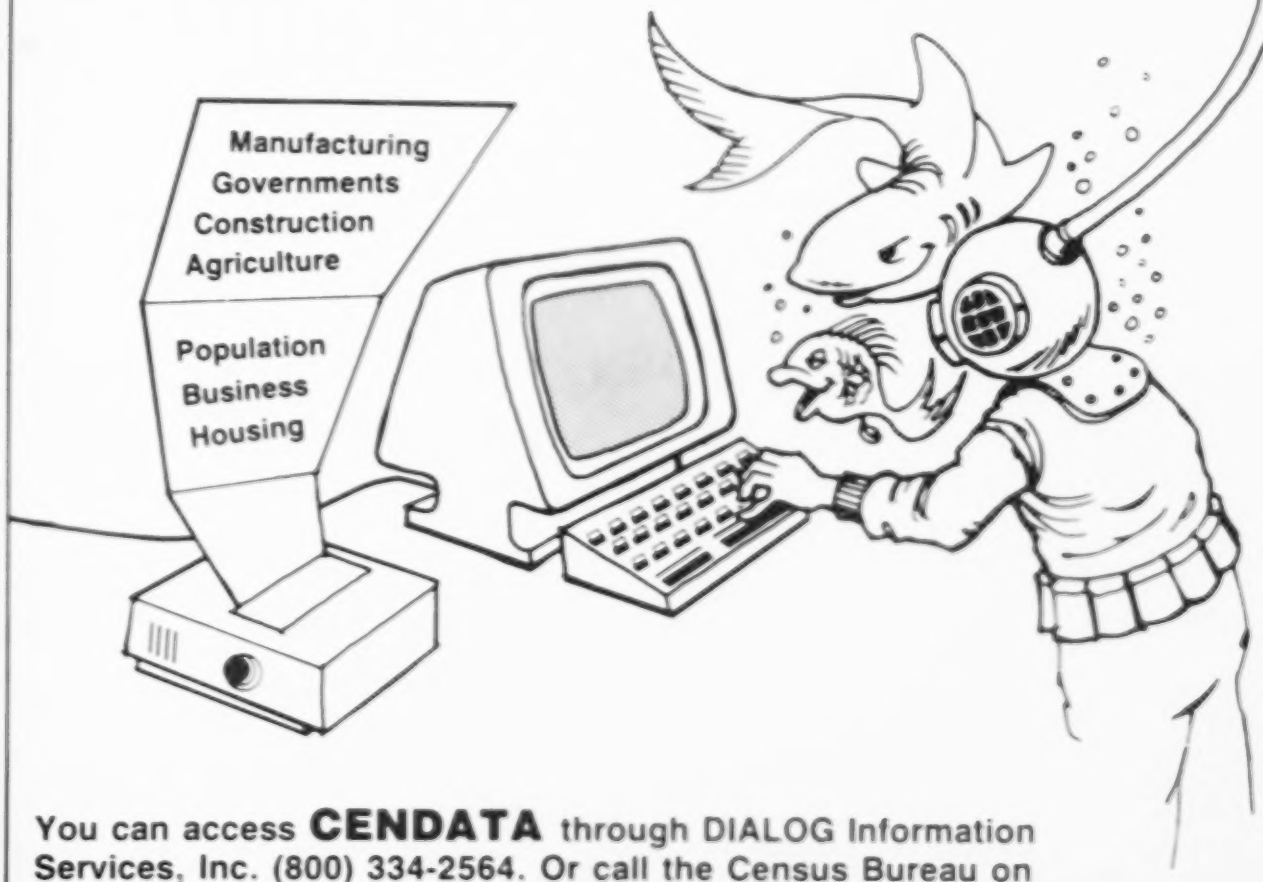
NOTES

WHAT'S YOUR LINE?

It's ONLINE!

NOW whatever you do, wherever you go, we've got data for you. In more depth than ever—

CENDATA™—the Census Bureau's online system—instantly provides the facts you need for decisions in virtually every area. It covers everything from ingots to elections, from rental vacancies to retail sales, from median family income to milk cows in Minnesota.



You can access **CENDATA** through DIALOG Information Services, Inc. (800) 334-2564. Or call the Census Bureau on (301) 763-2074 for more information.

Now key statistics are just a phone call away.